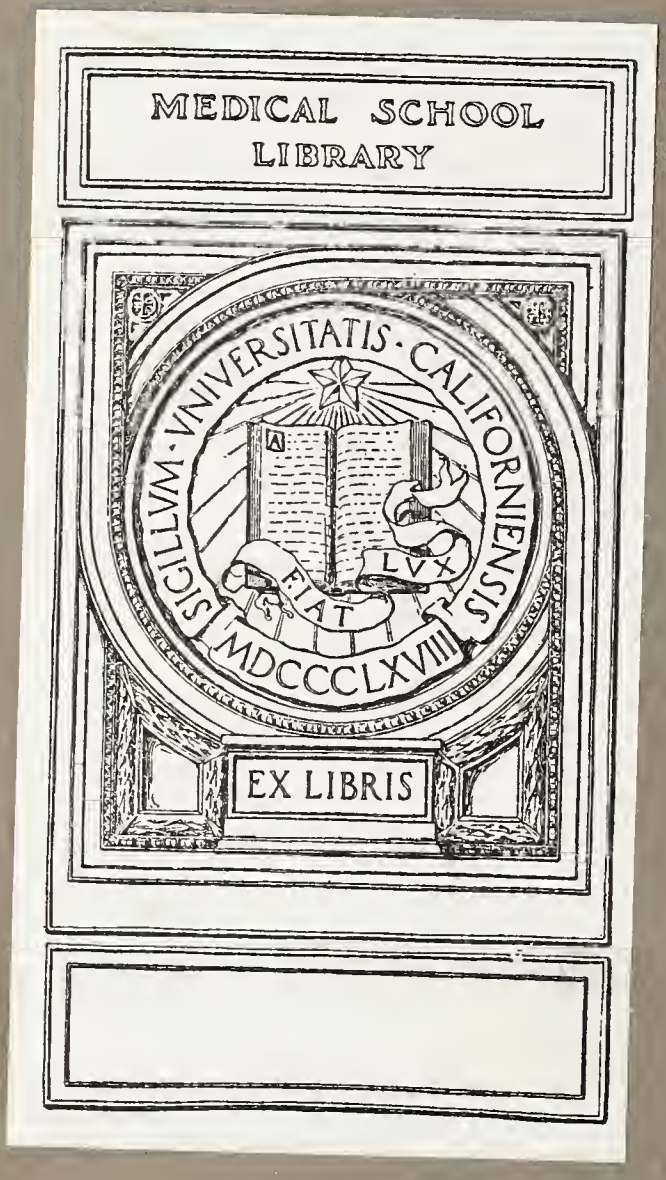

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The Journal

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EDITORIAL

THE CHARLESTON MEETING, MAY, 7, 8 AND 9

Notice has already been mailed to the members of the Association, calling attention to the change of the date of the annual meeting from April to May and calling for titles of papers to be presented on the program. The Scientific Committee decided to limit the papers to twenty this year owing to the plans for holding an especially attractive series of clinics. This will be an innovation for our society but the idea has been carried out in a few other States very successfully. In other words advantage will be taken of the very large clinical material in Charleston by virtue of the Medical College, Roper Hospital, and other hospitals being located there. The rules of the Scientific Committee require that a very brief abstract of all the papers to be presented shall be in the hands of the Secretary thirty days before the annual meeting. Titles should be sent in, however, much earlier than this in order that a general idea may be had as to the proper grouping of papers. The Francis Marion Hotel has been selected as the Head-Quarters Hotel of the Association during the meeting but several other first class hotels will be available. We have the assurance that rates will be satisfactory. Dr. Kenneth M. Lynch, of Charleston, is the General Chairman of all Committees in charge of the arrangements for the meeting and communications may be addressed to him at any time.

COLUMBIA SOCIETY HOLDS GREAT MEETING

The Secretary-Editor attended the meeting of the Columbia Medical Society on the evening of January 4, 1929. Under the Presidency of Dr. E. W. Barron and the skillful assistance of Dr. O. B. Mayer, Secretary, this

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Society starts the new year with great promise. In looking around the hall we noted about sixty men present. A large majority of these were young men most of whom have had the very finest medical training this country affords. We recall days of old when no young doctor essayed to get on his feet at a medical society and speak in the presence of the gray haired fathers of medicine except on the very rarest of occasions. It is not so now fortunately. The young doctor coming out of a class A school represents the highest type of education of any professional man in the world. He is perfectly at home in the atmosphere of learned Fellows and good speakers. If he has something to say he says it and it is gratifying to note the acclaim if he presents something worthwhile. At the Columbia meeting, for instance, Dr. R. G. Doughty, presented two cases of stab wounds of the heart, he had been called to operate upon. One of these cases has recovered and was presented to the Society. The other case died but the doctor presented graphically the post mortem report. When it is considered that the greatest surgeons in the world have seen but few cases and the mortality discouraging it is most pleasing that a young South Carolina surgeon should have such success. Then too, Dr. Watson Talbert, another young Columbia physician was associated with Dr. Doughty and was given credit for his remarkable skill in handling the pre operative and post operative details. He has had the extraordinary experience of seeing in his service four cases of wounds of the heart. Some of the world's most prominent surgeons have only seen six cases each.

The invited guest of the evening, Dr. H. H. Schoenfield, of Washington, D. C., presented a most timely subject, 'The Use of the X-Ray Man as a Consultant to the Surgeon.' The Columbia Medical Society meets in the attractive Medical Building where they have a good auditorium, a creditable library, and facilities for presenting slides, moving pictures, etc. The building is located in the heart of the city readily accessible to anybody.

PEDIATRIC SOCIETY MEETING

Elsewhere in this issue will be found a resume of the proceedings of the annual meeting of the South Carolina Pediatric Society held at Columbia, January 1, 1929, under the Presidency of Dr. C. W. Bailey, of Spartanburg. This Society now numbers about thirty members and is growing in importance and usefullness. The new Constitution and By-Laws provides that any physician in good standing in the South Carolina Medical Association interested in Pediatrics may become a member. It is to be clearly understood that the South Carolina Pediatric Society does not intend to narrow itself down to a Society purely of specialists. At the present time a very large number of general practitioners throughout the State must necessarily give a great deal of attention to the children of the familes in which they practice. Resolutions were adopted at the Columbia meeting requesting their consideration of membership in the Pediatric Society. The dues are only two dollars and this fund provides the dinner at the annual meeting. There are two meetings each year, one of which is held at the time of the meeting of the State Medical Association. Applications for membership may be sent to Dr. R. M. Pollitzer, Secretary, Greenville, S. C.

ORIGINAL ARTICLES

POST PARTUM CARE*

By R. E. Seibels, M. D., Columbia, S. C.

The immediate and later care of the mother and infant are subjects seldom presented in scientific papers, and yet they form the most important phases in the reduction of infant and maternal morbidity and mortality with which we have to deal. Particularly is this true where the delivery has taken place at home, and especially is it important in the rural communities where the care of the two patients falls largely into the hands of the voluntary attendant. This attendant is only too often ignorant and inefficient and yet possessed of all the therapeutic courage of those who do not know. The infant is anointed with various concoctions, the least harmful of which is vaseline, and so on through the various home remedies until even axle grease is used; and not to mention the various teas that are forced down its unwilling throat, is to open up a fertile field indeed. The mother too often is drenched with different nauseous mixtures, denied fresh air, nor permitted a cleansing bath "for fear of catching cold in her womb."

It is generally difficult for the physician to avail himself of any more skilled services than those mentioned above, nor has he the time to give very much of his personal attention to the details of the immediate care. However, it is possible for him to correct many of the evils that exist by taking pains to educate both the patient and the nurse in the rudiments of post partum attention.

Immediately after delivery, the baby should be oiled thoroughly with some bland oil—sweet oil is preferable. It should be warmly wrapped and not bathed for at least six to eight hours, thus giving the circulation and respiration full time to become established. If it does not breathe promptly after the birth, no strenuous efforts should be made as the carbon-dioxide in its blood is the best stimulation to the respiration which it is possible to obtain to bring about spontaneous respiration. Holding the baby up by its heels and gently stroking the upper trachea and larynx toward the mouth will often cause the baby to empty out a surprisingly large amount of fluid; mouth to mouth insufflation and immersion in cold water only too frequently set up a pneumonia which proves fatal. The less the baby is handled for the first forty-eight hours following its birth, the better it gets along. It is well to put it to the breast every six hours for a minute or two on each side to stimulate the flow of milk — and reflexly to stimulate contractions of the uterus. After the milk has been established it has been our custom to keep the baby strictly on the four hour interval; this is almost impossible to attain except under hospital conditions, as the usual custom is to put the baby to breast whenever it cries, and let it remain there as long as it will. Where the four hour interval can be established, the baby's digestion is not impaired, the stomach is completely emptied before any other food is put in and the mother is allowed to get much needed rest; the value of this method is shown by the fact that babies gain more regularly and more rapidly on this schedule, colic is almost unknown, and we have had many mothers to nurse successfully a second baby where, on the shorter interval, artificial feeding had to be resorted to in the early months.

Drugs of any sort are seldom required by the nursing baby and castor oil should be used only externally, as good maternal milk contains all the elements necessary for the baby's growth and development. Warm water that has been boiled should be given the baby twice a day, between nursings. The family physician should insist upon seeing the baby at the end of a month and if any umbilical hernia exists, it can be corrected by the application of a button somewhat larger than

*Read before the South Carolina Medical Association, Columbia, S. C., April 19, 1928.

the opening, which is applied firmly to the umbilicus and held in place by adhesive strips —this simple apparatus will cure the majority of herniae, in about three months.

In difficult deliveries and especially in breech deliveries, the occurrences of cerebral hemorrhage is not rare—the mechanism of its occurrence is said to be due to pressure on the cord with a sudden rise in blood pressure and rupture of one of the smaller vessels on the surface of the brain, and is evidenced by difficulty in establishing respirations and within a few days irregular respirations with a peculiar whining cry and possibly the development of weakness or paralysis in the extremities, and refusal to nurse. The treatment of this is complete rest for the baby, and feeding through a medicine dropper; and upon the recognition of a cerebral hemorrhage, repeat lumbar-puncture every twelve hours until the spinal fluid is free of blood and the other evidences of intra-cranial pressure are abated. If the paralysis remains when the baby is one month old, a competent orthopedist should be consulted in order that a proper apparatus may be devised to prevent deformity and atrophy.

The baby's mouth often undergoes severe treatment in the attempt to keep it "clean" and often the result of this attempt is rewarded only with irritation. A piece of cotton wrapped around the finger and dipped in a saturated solution of boric acid may be gently rubbed across the gums and the angles of the mouth once a day and will do no harm. It is hardly worth while to mention the need of immediate care of the baby's eyes at birth. The use of Silver Nitrate 1% or of Argyrol 20% is so frequent as to be the routine in the hands of all careful physicians. It has been found that Silver Nitrate 1% is the best routine solution to use as the Argyrol tends to evaporate and grow stronger and often causes irritation that may lead one to suspect an infection. A few drops of castor oil in the eyes when they have been irritated by the argyrol usually brings prompt relief.

The quantity of attention that the mother receives after delivery often is the determining factor in her future health. So much can be done that is actually harmful, and many things can be left undone, the neglect of which may cause temporary or permanent invalidism. Again where trained care is not available the physician must instruct the attendant in what to do, and even more important, what not to do.

Rest

Rest is one of the most important features of the care of the patient immediately after delivery. This means protection from visiting relatives and friends and their well-meaning and often misdirected efforts toward entertainment and congratulations. If possible, limit the visitors to one or two members of the immediate family and let their visits be short: best of all, leave the patient alone with the attendant during the first twelve hours. Insure proper sleep by the administration of codeine and the prevention of the frequent administration of "teas," soups and other worthless slops. If the physician decides to feed the patient let it be a small amount of easily digested and nourishing food, soft eggs, cereal and milk. When possible to do so, visitors should be restricted to the minimum during the time that the patient is in bed, for it has been our experience that a crowd of visitors sitting around the patient will often bring on nervousness, sleepless nights and failure of the milk supply; we have occasionally found as many as eleven grown-ups and six children in the room with the patient three days after a prolonged and difficult delivery. The mother should not be annoyed by having the baby brought to breast at frequent intervals, and the respite gained by infrequent, short nursings, as indicated above, is of the greatest possible value.

Diet

Until the patient is out of bed, food should consist mainly of small amounts of highly nourishing ingredients; soups and teas have no place in the care of any one except the neurotic. Green vegetables should be added to the diet early and both fresh and stewed fruits, with the exception of bananas, for their value in combating constipation. No food that is well digested by the mother will cause any discomfort to the baby.

Drugs

An occasional dose of codeine to bring about a restful sleep is the only useful drug. The habit of giving castor oil twenty-four to forty-eight hours after delivery is a bad one, and its only effect has been to upset the mother and not infrequently to diminish the milk supply. There is no reason for bringing about a violent purging after delivery, any more than there is after any other violent and prolonged muscular effort. Those patients who are left alone, so far as laxatives are concerned, show less "reactionary fever" than those who are given castor oil and salts, and usually have a normal evacuation on the second or third day.

The Bladder

Some bladder irritation and frequency of urination was once regarded as the inevitable result of childbirth. It was the penalty not of the process, but of poor obstetrics, relaxed bladder supports and failure of the attendant to see that the bladder was completely empted. Much of this can be prevented by careful attention to the condition of the bladder during delivery, for the patient is seldom able completely to empty it, especially during the latter part of a prolonged or difficult labor. Bearing this in mind, the physician should catheterize the patient if he finds there is any vesical distress, and especially should this be a routine measure immediately before any forceps or breech delivery, in order to get the maximum room in the pelvis and to prevent injury to the bladder itself.

In our hospital work, any patient who has difficulty in voiding after delivery—either pain on urination or who has to be catheterized—we catheterize once a day after voiding, until the residual urine amounts to less that ½ ounce. This is one of the most important features in post partum care, and was brought forcibly to our attention on one occasion when we saw a patient in consultation who was supposed to have post partum convulsions and the attendant reported that she had voided at frequent intervals. The catheter revealed 62 ounces of urine in the bladder and its withdrawal was followed immediately by a cessation of the convulsions—which were, in reality, but evidences of agonizing pain from distention. Any patient showing bladder irritation after delivery should be catheterized and a specimen examined for pus.

Displacements

Posterior displacements of the uterus following delivery, where operative interference has taken place, occurs in at least 40% of all cases. Occasionally these displacements do not develop until several months after confinement, but we believe that the great majority of them can be prevented by the following method:

Have the patient lie on abdomen for twenty minutes night and morning, beginning the fifth day. (This not only helps throw the uterus forward, but promotes drainage of the lochia). The patient should be supported in a sitting posture, beginning the third day, when she wishes to empty her bladder, or for a bowel movement, and this simple manoeuvre often obviates the necessity for catheterization or a laxative. Beginning on the eighth day, the patient should be required to assume the "knee-chest" posture for the time it requires her to take twelve breaths and should continue this exercise night and morning until the baby is one month old. These simple methods will prevent sub-involution of the uterus and its attendant displacements in 75% of the cases where lacerations of the cervix and of the perineum do not exist, and even in those cases where there have been lacerations, this routine treatment reduces the discomfort very materially.

Lacerations

We may expect to find some lacerations of the cervical mucosa after the majority of normal deliveries, and in 100% of the cases where operative interference, either in the delivery or in the induction of labor, has occurred. The small superficial lacerations of the cervix deserve no treatment and in many instances give rise to no symptoms. These lacerations may later on become erosions of the cervix if the pernicious habit of giving douches is indulged in. The most that a vaginal douche can accomplish after delivery is to remove those secretions which will be removed by drainage, and the worst that can be done

is to promote infection. If at the final examination of the patient small erosions appear, burning them off with the cautery is usually all that is necessary.

One of the most frequent causes of post partum hemorrhage of severe degree is laceration of the cervix, which extends up to and involves the circular artery. This may occur within the cervical canal with no loss of continuity of the external cervical mucosa. If the facilities are not at hand for immediate suturing of this laceration, the cervix may be drawn down to the vulva and it may be packed and the hemorrhage controlled without any necessity for packing the uterus itself. When possible, these severe lacerations should always be sutured.

In many instances there is a laceration of the perineum which does not show externally and it is the external lacerations which are of the least importance. The lower portion of the levator muscle has no part in supporting either the rectum or the uterus and its repair is of minor importance. It is the middle and upper portion of the levator which supports the cervix and prevents rectocele and it is this portion which receives the least attention from the average obstetrician. In order to determine whether or not there has been a separation of this portion, it is necessary to have a good light and thoroughly to expose the posterior vaginal walls. Lacerations of the perineum should be repaired immediately. "There is no disgrace in tearing a perineum, but there is disgraceful neglect in failing to repair it.

Pregnancy

Not least among the duties of the attending physician is that he advise a couple as to the necessity for delaying another conception until the baby is not less than one year old, and the physician must not be content merely with giving this advice, but specific instructions should be given as to what means to take.

Those patients who have shown signs of pulmonary or cardiac lesions, and those who have given evidence of toxemia should receive his careful attention, directed to the prevention of the increase of this pathology. We believe that the normal patient should receive almost as much care in the prevention of small injuries from becoming major ones. If the physician will show a real interest in his patients and offer service of real value, it is seldom that their hearty cooperation cannot be secured. Let them be impressed with the desire to be well, comfortable and physically fit after childbirth, and explain to them how it is possible to attain these ideals.

DISCUSSION

Dr. W. C. Hearin, Greenville: I feel that this symposium has been most beneficial to us all. In regard to Dr. Moore's paper, I do not feel that I could criticise him at all; his paper was most excellent, and we all should have gotten some very valuable information from it. In regard to the toxemia of pregnancy, or eclampsia, I thoroughly agree with him that the conservative method of treating eclampsia has given much better results. I want to say just one thing, though, about the treatment of eclampsia by morphin and magnesium sulphate. In the recent literature there has been a great deal said about the use of hypotonic glucose, as well as of 15 and 20 per cent., to take the place of magnesium sulphate. I have had very small experience in using glucose instead of the magnesium sulphate, and my experience, though quite limited, has been disappointing. Only recently I had one patient who was doing nicely and keeping the hypertension down, after having seven convulsions, with the magnesium sulphate. We used the sugar, and some very distressing symptoms arose, and labor had to be induced, whereas with the magnesium sulphate I felt it would not have had to be done.

Dr. Wilson stressed the need of rectal examinations. I feel that if we do rectal examinations regularly we shall get as much information as from vaginal examinations, and we know there is much less risk of infection.

Dr. Wilson spoke of pituitrin during labor. I may be a fanatic, but I do not think there is any need for pituitrin until after the baby is born. He said not to use it until the cervix is dilated and the head is on the perineum. Under such conditions a low forceps delivery can be done. We know that the reaction to pituitrin is different in different individuals, so I think the safest method is not to use pituitrin until after the baby is born; I think the low forceps is better.

I was also mighty glad to hear Dr. Thompson discuss the laparotrachelotomy in place of the old classical section. As someone has said, "Once a cesarean, always a cesarean." But after the low section the doctor refers to we find there is not always a section afterwards. Instead of four per cent. ruptured uteri in sub-

sequent labors, we find fewer than one per cent. ruptured. I think it is also possible to do them much later, after a test of labor, than it is possible to do a classical section.

Dr. Wilson also spoke of anesthesia. Just here, in regard to cesarean section, I should like to state that until recently I have been doing practically all my cesareans under local; but recently I have been using a combination of rectal anesthesia plus local, and I find that in these cases it has a very happy effect.

Dr. L. W. Boggs, Greenville: These papers have been ably presented. Personally, I was interested in what Dr. Moore had to say about the toxemias and the thyroid, and I wish he had gone a little further into the discussion of those subjects. I believe that the patients who have had toxic goiter removed should be advised not to become pregnant again; if they do become pregnant they should be very carefully watched and the metabolism tested at frequent intervals. Of course, a nontoxic goiter may be removed at any time during pregnancy, if the occasion arises; and these cases are rarely if ever made worse by becoming pregnant. But patients who have had toxic goiter should be watched very carefully if they ever become pregnant again, for damage has been done not only to the heart but to the kidneys as well.

Dr. Moore, closing the discussion: Somebody asked me to say something about insanity in pregnancy, but I do not know whether I ought to say a word about insanity with Dr. Williams sitting on the back row. I might say this, that of course there is such a thing as insanity in pregnancy. My private opinion is that it is a toxic affair, but it has a tendency to recur in succeeding pregnancies, and it is a tremendous affair for the mother and baby. I do not know whether there is any tendency to inheritance. Some differ on this point. I am sure, however, that if a woman has two insanities in two pregnancies she should be sterilized and not run the risk of losing her mental astuteness. Just this year I had a case of a woman who had killed three different babies three months after they were born; she went insane and drowned them or choked them or killed them in some other way. She was sent to me, and I very promptly sterilized her and broke up a fourth pregnancy, because I thought I had not the right to subject her to the horrors of a fourth infanticide.

Someone said something about contracture in the masculine type of pelvis, but I did not hear the paper very well. If the head can make its way out here there is no danger. Possibly the doctor brought it out; I could not hear.

Dr. Seibels brought out some very interesting facts. He handled the dirty work of this symposium. He and Dr. Wilson both stressed the need of doing something for hemorrhoids. I do not know of anything that will make the patient much more uncomfortable than one of those huge purple rosettes the third day after delivery. That can be prevented by opening the small purple spots which we see on delivery. It can be done very easily, because the patient is usually under anesthetic and partially narcotised from pressure.

I think in any of these babies that do not nurse or have repeated cyanotic attacks it is a perfectly good diagnostic measure to do a lumbar puncture right away and go in after that every six hours until there is a straw-colored fluid. If you do that you will prevent that subsequent damage which will later be classified by our neurological friends as Little's disease.

I am sure Dr. Hearins should have been on the program instead of me. My understanding of the use of glucose solution is not as a substitute for magnesium sulphate but as an adjunct or as a treatment for special conditions, such as approaching acidosis or an already present acidosis.

The second gentleman thought I ought to have gone further on thyroids than I did. I might say that as a matter of fact I went a little further on the thyroids than I should have, because I said a lot more than I know. I think that point of pregnancy after the removal of a toxic goiter is very important. I had a patient die last week who had pregnancy begin a month after the removal of a toxic goiter. She was brought into the hospital in a state of coma, with all that goes with thyroid toxemia, and had a kidney breakdown and also slight tetany. Tetany, I think, is very likely to occur, because we already have a loss of calcium content in the mother; she is using a lot of it for the bony structure of the baby. Fortunately, calcium chlorid intravenously will take care of that.

Dr. Wilson, closing the discussion: I was very glad to hear Dr. Hearin's discussion, but I think he misunderstood me regarding pituitrin. I brought out in my paper that pituitrin is more dangerous than low forceps.

The old laparotrachelotomy was too intricate for practical purposes. Fortunately, the new low flap operation has become standardized and the technic simplified so that any of us can perform it with safety.

I am sorry that we have not heard more discussion about the prevention of eclampsia. To my mind, that is the important part of the treatment. The conservative treatment is by far the best, I know from experience. At one time I did cesareans on all eclamptics and lost about seventy-five per cent; later I used conservative methods, and my mortality is now about twelve per cent.

I agree with Dr. Seibels about feeding the mothers. It is necessary for them to eat in order to regain their strength and to establish the milk supply.

Dr. Thompson, closing the discussion: While puerperal eclampsia is not an indication for cesarean, I do not think it is a contraindication for cesarean where other conditions are present that might necessitate the operation. In placenta previa I believe the choice should be between the operation of version and the operation of cesarean.

Dr. Seibels, closing the discussion: Dr. Janeway of New York gained his reputation as a consultant by always doing a rectal examination. He said that he found that usually the physician had forgotten to do it and it was the only thing left for him to do. For the same reason, I think the discusser of a paper should endeavor to gain a reputation by bringing up anything forgotten by the essayist. Dr. Moore left out a very important point in his very full paper, and that is the question of the fee. I think the first time the physician sees an obstetrical case he should endeavor to come to an agreement about the fee, how much it shall be and how it shall be paid. The method that I have found very satisfactory is to make a flat fee for the necessary prepartum care, delivery, and care of mother and baby for one month, with the distinct understanding that this fee is to be paid the day the baby is one month old. As a general rule, these fees are paid without any bill being sent.

I think one point in the discussion of cesarean section is of the greatest importance; no patient should have a cesarean without a good stereoscopic x-ray. I know from bitter experience that without this precaution one can be let in for very distressing situations. I did a cesarean section on a patient with a very much contracted pelvis and had the misfortune to deliver an anencephalic monster. That one experience taught me never to do another section without an x-ray. Its use brings us another advantage. Occasionally the x-ray shows a small head engaging in a pelvis which our measurements would lead us to believe to be out of proportion. It does not matter what the mother's measurements are as long as the child's head will go through.

I do feel that there has been some harm done in impressing the general practitioner with how easy it is to do sacral anesthesia, synergistic, and local anesthesia. I believe these methods should be reserved for hospital practice with trained assistants.

THE SEDIMENTATION TEST

F. B. Johnson, M. D., and W. G. Gamble, Jr., M. D., Charleston, S. C., Laboratory of Clinical Pathology, Medical College State of S. C.

The rapidity that red cells settle in drawn blood has been noted for many years, and attention particularly called to this occuring in conditions of septic absorption. Little clinical importance was, however, attached to this until Fahreous showed this occuring in pregnancy. The later work of Linzenmeier, simplified the method used. He also showed that there was a decided increase in the rate of sedimentation in pelvic inflammatory conditions, and that the test was of prognostic value.

The test has been shown by various writers to be of particular value in pelvic inflammatory conditions, tuberculosis, malignancy, and pregnancy.

Method of Performance

The comparison of the results by different writers is often confusing to the average reader because of the various methods that have been introduced for determining the sedimentation rate. Glass tubes of various diameters and length, test tubes, centrifuge tubes, graduated pipettes, Sahli tubes, etc., have been used for holding the blood. The blood has also been used in different dilutions and concentrations of sodium citrate to prevent clotting.

The method of reading the results varies considerably; some methods recording the time it takes the cells to settle a specified distance (Linzenmeier), others measure the number of millemeters of height of serum above the cells in a definite time of one and two hours. (Westergreen).

The cells are allowed to settle slowly by some, by others thrown down by a centrifuge at a certain speed for a given length of time.

By the surgeons to whom the test appears to be most useful the method of Linzenmeier, that is the time it takes for the cells to fall a distance of eighteen millemeters is more widely used.

In order to try to correlate the various me-

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thods so that a comparative value may be obtained, we have investigated a considerable number of the methods already described, and also tried out various procedures to bring out certain points for discussion.

The methods used by us were the Linzenmeier method, the Westergreen method, and the Morriss method, and others, as well as various modifications of these. Any of these can be carried out easily.

Linzenmeier Method[1]

In the Linzenmeier method glass test tubes 6.5 cm. long and 0.5 cm. inside diameter with a mark at 1 c.cm. capacity and at distances of 6, 12, 18, 24 mm is used. The blood is withdrawn from a vein into a syringe and mixed with a 5% solution of sodium citrate in proportion of 1 to 4 (0.2 cc sodium citrate to 0.8 cc blood.), and placed in the tube to the mark of 1 c. c. The reading is usually taken as the number of minutes it takes for the cells to settle to the 18 mm. mark. Normally this takes about 160 minutes.

Westergreen Method[2]

In the Westergreen method glass tubes 300 mm. long and 2.3 mm in diameter are drawn out at one end to a tip and a mark is made on the tube 200 mm. from this tip. The blood is diluted with 3.8% sodium citrate in proportion of 1 to 4 and the number of millemeters of height of serum above cells is determined at the end of one and two hours. Normal, this is 1 to 7 mm. for one hour.

Morris Method[3]

Morriss method uses a one cubic centermeter pipette graduated in one hundredths, the blood being diluted with 3.8% sodium citrate in proportion of 1 to 4 and drawn up in the pipette to the 1 c. c. mark. The percentage of volume of serum above cells is determined at the end of one and two hours. Normally this is under 12%.

Cooper Method[4]

In the Cooper method centrifuge tubes are used and the blood is obtained and diluted with potassium oxalate as for blood chemical analysis (20 mg potassium oxalate for 10 cc of blood). Blood being placed in the centrifuge tube to the 5 cc mark and the volume percentage of cells determined at five, ten, fifteen, thirty and forty-five minutes. Normally at the end of forty-five minutes it is about 85% cell volume.

In the study of normal individuals by the methods described and the use of tubes of various other lengths and diameters, we have noted the following:

1. In columns of varying height of 50 mm. to 300 mm., the distance of fall of red cells was determined, and the rapidity of fall was more marked the longer the tube.

2. The diameter of the tube effects only slightly the distance of fall. Tubes of varying diameters of 2 mm. to 15 mm. showed approximately the same distance of fall of cells.

3. With the method of Morriss using graduated pipettes it was found that in measuring the percent of volume of serum above cells varied on the same blood, unless the length of the column of graduation was identical on the pipettes used. The length of graduated space covered on the pipettes varies, unless the pipettes are carefully selected. Such are hard to obtain. A 10 percent drop might correspond to 18 mm. in one tube and 10 to 12 mm. in another tube. A 10 millemeter drop may correspond in one tube to 10% in another to 6%.

4. The normal rate for determination by volume percent will vary arbitrarily for each separate graduated tube used. Any graduated pipette or ungraduated tube may be used for determination of rate if we will stick to the determination in minutes to fall 18 mm., or the distance of fall in mm. in one or two hours. Small tubes in diameter use less blood, but it was noted that tubes of less than 2 mm. the rapidity of sedimentation was more rapid than tubes of 2 to 15 mm. Therefore tubes should not be of less than 2 mm. or more than 15 mm. in diameter, and it is best to use 1 c. c. of blood, the smaller quantities may be used. The height of column should be 50 mm. or more. With such tubes you may determine the time it takes for cells to drop, according to the Linzenmeier method, or the number or millemeters of drop of cells in one and two hours according to the method of Westergreen.

Clinical Value

In addition to the increased rate of sedimentation being found to be of particular value in inflammatory pelvic conditions, tuberculosis, malignancy, and pregnancy, further investigation has shown the increased speed of settling of cells to occur in a number of other conditions.

The increased rate may be said to occur in all conditions where the higher products of protein destruction are found increased in the blood. Consequently in addition to the conditions already mentioned the sedimentation rate is increased in the following: all febrile conditions; in many inflammatory conditions without fever; after parenteral introduction of foreign protein; after the use of X-ray and radio-active substances therapeutically; in kidney disease showing high nitrogen retention; in cardiac decompensation; in liver disease where there is a lack of normal protein destruction; in benign tumors where destruction and resorption of cell products is occurring as well as in malignant tumors; active syphilis, paresis, and tabes; and after operation of any kind for at least seven to eight days.

Over enthusiasm occuring at first in regard to the value of this test has now given way to the realization of its present restricted value. The greatest value of the test may be said to be that its presence denotes abnormal tissue destruction occuring some where in the body. As Polak[5] states, "the test never lies."

CASE 47643. Male. Diagnosis, Chronic myocarditis, chronic nephritis, and generalized arterioselerosis. WBC. 17,170. Polys. 80%, Hbg. 40%. Urea Nitrogen 41. Had subnormal temperature. Sedimentation time 40 mins. Percent for two hours 55. A retroperitoneal abscess was found on autopsy.

As an indicator of inflammation, this test appears to be of more value in some cases than does the total and differential blood count. It is more constantly present, but does not show as early an appearance, for instance the test is of little value in the diagnosis of acute appendicitis. It is said, in this condition about thirty hours elapse before the sedimentation shows any increased rate.

In pelvic adnexal inflammatory conditions the test has been shown by many surgeons to be of undoubted diagnostic and prognostic value, particularly as to the suitable time to operate.

Some have declared when the rate is 60 min. or less, that operations should not be performed, others have shown that when other clinical evidences warrant it, these patients may be operated upon successfully when the rate is under 60 min. So by some the lower limit of contradiction for operation is placed at 30 to 40 minutes.

CASE 47658. Female, Diagnosis—Salpingo-oophoritis and chronic appendicitis. White blood count 11,250. Hgb. 75%. Polys. 75%. Sedimentation time 17 minutes. Percentage 43. On account of high rate, operation was postponed. Three days later sedimentation time 20 minutes. Percent 35. On operation a subacute puruelent salpingitis was found. This patient was operated on after this in spite of low rate and recovered.

In tuberculosis the test may be of diagnostic value, in that pulmonary tuberculosis is said not to exist actively, unless the rate is increased. However, the chief value in this condition is of prognostic aid. With any increasing time improvement is occuring, and with a decreasing time the process is extending and the prognosis is bad.

CASE 43386. Female. A progressive case of pulmonary tuberculosis. Hgb. 54%. WBC. 12,955, Polys 70%. Sedimentation time 20 minutes. Percent for two hours 50. This case showed a progressive decline with septic temperature.

In the diagnosis of pregnancy it is of little value because in the first place the increased rate occurs only after the third month and second from the fact that such confusing tumors as fibroids will show an increased rate when degeneration is taking place in the tumor. When not present it may be of value in this and in cystic tumors.

CASE 47750. Female. Diagnosis—Uterine fibroids, chronic salpingo-oophoritis. White blood count 6,560. Polys. 70. Hgb. 60. Sedimentation time 90 minutes. Percent for two hours 18 minutes. Patient operated on and a very chronic condition of the tubes and ovaries was found, with degeneration of fibroids. Here

we have an example of the rate being influenced by fibroids.

It is said to be of value in the differential diagnosis of adnexal inflammatory tumors from ectopic gestation, as it is not found in the first three months of pregnancy. However, it has been shown it is of little value after the rupture of the tube in ectopic as this will produce an increased rate.

In malignacy its diagnostic value is also somewhat impaired in that benign tumors with degenerative changes or some associated inflammatory condition will increase the speed of sedimentation.

CASE 47428. Female. Carcinoma of cervix. Inoperable. Hgb. 63%. WBC. 8,200. Polys 55% on 2/4/28 sedimentation time 99 minutes. Percentage for two hours 55. As the disease progressed the time and percent were as follows: 40 minutes and 49 percent. 10 minutes and 67%. Finally 10 minutes, and 64%.

Conclusion

1. While any accepted method for determining the sedimentation time is of value, the Linzenmeier or Westergreen were in our hands the most accurate, and on account of uniformity the Linzenmeier seems the most applicable.

2. The test seems to be of more value to the gynacologist, particularly in pelvic inflammations, especially in indicating the favorable time for operative interference.

3. The test in some cases indicates active inflammation, or protein destruction, when the temperature, blood count, and clinical observation fail, but cannot or should not replace entirely clinical methods or the white blood count.

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3—Morriss, W. H., Amr. Rev. Tuberculosis, 10:431-1925.

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EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M. D., F. A. C. S., CHARLESTON, S. C.

The Embryology and Neurohistology of Sphenopalatine Ganglion Connections: A Contribution of the Study of Otalgia, Dr. O. Larsell & Dr. R. A. Fenton; Laryngoscope, June, 1928

Man's use of sternutatory drugs from the remotest antiquity shows his thoughts of the nasal mucosa as a portal for influence upon the vital forces and upon the brain. In relatively recent years, the sensory and sympathetic reactions of the nose have tempted various bold theorists to attack distant cranial, visceral and pelvic disorders by cauterization of certain turbinal or septal areas. Fantastic systems of localization were published, with a succession of reputed cures.

The sphenopalatine ganglion has its embryological origin in mamals by migration of cells from the V and VII ganglia. It is connected, however, in the adult, with:

1. The maxillary branch of the trigeminus nerve through the sphenapalatine nerves.

2. The facial is through the intermediation of the Vidian nerve and the great superficial petrosal nerve.

3. The glossopharyngeus nerve through the great deep petrosal and its continuations, the small deep petrosal and the nerve of Jacobson.

4. It is possible that there are also connections with the vagus, through the communicating branches between the nodose ganglion of the latter nerve and the glossopharyngeus nerve.

The Neurologic Aspects of Infection of the Nasal Sinuses. Dr. Simon L. Ruskin; Archives of Otolaryngology, June, 1928

Blocking of the nasal ganglion will relieve many patients with asthenopia. The pains are due to overaction of the facial muscles resulting from irritation of the facial nerve via the nasal ganglion. The nervus intermedius of Wrisberg, continued as the N. superficialia petrosus major, is the sensory portion of the facial nerve. From the geniculate ganglion (the ganglion of the sensory facial) the great superficial petrosal nerve travels to the nasal ganglion. This connection is of great importance. It contains taste fibers to the roof of the mouth and side of the tongue, tear fibers to the lacrimal gland, motor fibers to the levator palati muscle and sensory fibers as well. The pains described as part of the Sluder syndrome referable to the back half of the head closely follow the facial distribution rather than the trigeminal. Some patients show a decided front half headache; others have pains in the back half of the head. This is due to two different mechanisms, one trigeminal or front half, the other facial or back half. In the front half type the pains are typically sensory or trigeminal, in the back half they are myalgic or facial. These pains are readily relieved by the blockage of the sphenopalatine ganglion.

The myalgic nodes and painful muscles at the back of the head are vasomotor in origin. the nerve of Wrisberg carries cranial autonomic fibers, some of which pass to the nasal ganglion. These fibers also pass along the facial branches of the muscles and irritation of the cranial autonomics in the nose cause vasomotor spasms in the facial distribution. This spasm interfers with muscle metabolism and gives rise to local symptoms. The same mechanism can be used to explain the almost uncanny results obtained in persons with severe pain in the shoulder, with lumbage and sciatica.

Probably some cases of noises in the ears and impaired hearing are due to vasomotor disturbances in the ear and myalgic conditions of the stapedius muscle.

Vasomotor states of the local nasal structures resulting in sneezing and rhinorrhea can be controlled by cocainization of the nasal ganglion.

Migraine Controlled Through the Nasal Ganglion. Lawrence K. Gundrum, M. D., Archives of Otolaryngology Nov., 1928

This case presents unusual features. Severe attacks began at the age of puberty and gradually increased in frequency and severity. At first, they appeared only at the menstrual periods; later, they occured between periods, and were always present just before or during menstruation. The menstrual periods became very irregular and were associated with great prostration and pelvic pain. After treatment of the nasal ganglions, menstruations became normal. The patient had been incapacitated from active life for seven or eight years. The seeming hypochondriasis has entirely disappeared. If this is a case of migraine the question arises as to what part the nasal ganglion played in the nsydrome. The cause of migraine, has, of course, not been definitely proved. There is no doubt that the gastrointestinal tract plays an important part. The nervous mechanism also is important. Buch has proved that the sympathetic nervous system carries pain impulses, at least under pathologic conditions. If this is true, it seems reasonable to suppose that the nasal ganglion is a link in the chain which carries impulses of pain causing the symptoms of the type of pain which is called migraine. Removal of this link relieves the symptoms. This is in accord with the theory of pathologic currents described by Byrd.

I do not propose treatment of the nasal ganglion in all cases of migraine.

Herpes Zoster and Intercostal Neuralgia Relieved by Sphenopalatine Ganglion Treatment. Dr. S. L. Ruckin, Laryngoscope, November, 1928

Case 1; Mrs. D. C., age 32 years, was referred to me by Dr. Harry Handleman with a history of having had for the last three weeks pain along the course of the ninth left intercostal nerve. This was followed by a typical eruption of herpetic vesicles and the pain became lancinating in character and associated with troublesome itching. In addition, she suffered from general nervousness, a choking sensation in the throat, watery nasal discharge, and a sensation of tightness across the bridge of the nose. She had had the choky sensation in the throat for a few months, and within the same period she noted that her voice had become low-pitched.

Cocainization of the nasal ganglion gave immediate relief from the zoster pains.

It is probable that the pathway lies along the sympathetic fibres passing from the nasal ganglion to the cervical sympathetic ganglion, and from there to the sympathetic ganglion communicating with the ninth spinal ganglion.

Leriche and Fontaine noted certain morbid phenomena in the throat after an operation upon the cervical sympathetic; dryness of the throat, hoarseness and difficulty in swallowing; associated with hyporemia and edema of the tongue, larynx and pharynx. They suggest that this ganglion may represent a vasomotor centre for the larynx.

Heitger relieved the pain of angina pectoris by cocainization of the nasal ganglion. Sluder feels that this is unquestionably the blocking of the transmission pathway of sympathetic nerve pain.

WOMAN'S AUXILIARY
South Carolina Medical Association

OFFICERS

Mrs. W H. Nardin, Anderson, S. C. _____ President
Mrs. W. A. Able, Columbia, S. C. ____ First Vice President
Mrs. D. S. Pope Columbia, S. C. ___ Second Vice President
Mrs. I. H. Grimball, Greenville, S. C. __ Recording Secretary
Mrs. Frank Wrenn, Anderson, S. C. _____ Cor. Secretary
Mrs. J. R. Miller, Rock Hill, S. C. ____ Publicity Chairman

COUNCILORS

Mrs. W. G. Gamble, Jr., Charleston, S. C. _____First District
Mrs. Ben Wyman, Columbia, S. C. _____Second District
Third District to be Appointed.
Mrs. J. W. Bell, Walhalla, S. C. _____ Fourth District
Mrs. W. J. Dunn, Camden, S. C. _____ Fifth District
Mrs. E. M. Hicks, Florence, S. C. _____ Sixth District
Mrs. Carl B. Epps, Sumter, S. C. _____ Seventh District
Mrs. L. A. Hartzog, Olar, S. C. _____Eighth District

Now that the Christmas holidays are over the auxiliaries will be initiating new programs and activities. The publicity chairman requests the councilors to write of the work of their organizations and thus pass on helpful suggestions to others. Please send in news.

The Woman's Medical Auxiliary wishes to express to Mrs. H. M. Stuckey its deep sympathy for her in the loss of her devoted husband. Dr. and Mrs. Stuckey have both been prominent in the medical life of South Carolina for years, and his passing takes from the profession one of its worthiest and most loyal members.

In her great sorrow Mrs. Stuckey can feel assured that she is much in the hearts and prayers of her co-workers in the auxiliary.

Mary L. Miller.

As the Sims' Memorial is to be unveiled in Columbia in the spring, it may not be amiss to briefly review the part played by the Woman's Medical Auxiliary in the erection of this memorial.

Several years after the organization of this body the sentiment seemed to grow that the auxiliary should enlarge its activities and do something toward a recognition of worthy service rendered humanity by some one in the medical world. The fact was brought out in the convention in Sumter in 1926 that while South Carolina had produced one of the world's greatest physicians and surgeons in the person of Dr. J. Marion Sims, she had done absolutely nothing to perpetuate his memory.

It is rather a sad commentary on humanity, that while the nations of the world have been generous in erecting monuments to military heroes, they have been very slow in doing as much for those who have been heroes in the battle against disease.

It seemed eminently fitting that women, who owe so much of relief from pain and suffering to him who toiled so long and patiently that they might have health and happiness, should take up the work and carry it to completion. Under the able leadership of our state president, Mrs. H. M. Stuckey, an active campaign to raise funds was started. The press gave publicity to the cause, local auxiliaries presented it to schools, women's clubs, and other organizations, and the doctors cooperated wholeheartedly. Contributions commenced to come in and we began to think of the Sims' Memorial as a reality rather than a dream. While there was a diversity of opinion as to what form the memorial should take, there was perfect harmony in the committee when it was decided that it should be a bust, the funds not being sufficient for a life-size statue. Both the University of South Carolina and the South Carolina Medical College coveted the honor of having the memorial placed on their grounds, and it was perfectly natural that they should, for Dr. Sims was an alumnus of both institutions; but the consensus of opinion was that it should be on the State House grounds in Columbia, where so many monuments to the South's famous sons have been erected.

After a little more than two years of intensive work, the goal is in sight; more than $3,000 has been contributed. The state will duplicate the auxiliary's collection. The sculptor, Mr. Quinn of New York, is at work on the bust. It is to be unveiled in the spring and it is our earnest desire that a large delegation of doctors and their wives be present on this occasion to do honor to one of South Carolina's sons of whom we are justly proud, to one who labored, not for glory, not for gain, but for humanity's sake.

(Mrs. J. R.) Mary L. Miller, Publicity Chairman.

MEDICAL AUXILIARY ELECTS PRESIDENT

Mrs. W. S. Fewell was hostess to a meeting of the Greenville County Medical Auxiliary held yesterday afternoon at her home on Belmont avenue. Entertaining with her was Mrs. George Wilkinson. At this very interesting meeting new officers to serve during the present year were elected as follows : Mrs. J. Warren White,

president; Mrs. W. C. Hearin, vice-president; Mrs. J. G. Murray, recording secretary; Mrs. C. P. Corn, corresponding secretary; and Mrs. Clay Evatt, treasurer. With these officials the organization can expect to accomplish a great deal during the year.

At the meeting held yesterday annual reports of committees were heard that showed unusual achievements during the past year under the leadership of Mrs. W. C. Hearin. The auxiliary will this year assist materially with the milk and ice fund that is so necessary to the community welfare. The organization will also work with the Hopewell organization in its great work.

Two musical numbers were on the program rendered yesterday afternoon. Haskell Boyter sang a group of two numbers accompained by Miller Simpson and Mrs. Simpson played a piano solo.

The hostesses served delightful refreshments at the close of the meeting.

Greenville News,
January 9, 1929.

-:- NEWS ITEMS -:-

DR. DULIN IN LEGISLATURE

Clover, S. C., December. 21—York county is sending its only "country doctor" to represent it in the legislature down at Columbia, which meets early next month. The friends of the only country doctor whose circle of friends and acquaintances is wide, not only over York county but over the Carolinas, is confident that he will give them in the state's legislative halls, the same honest and skillful and conscientious service which he has given the people of Bethel township as a physician during the past thirty-six years. A quarter of a century ago when there were no automobiles in the country side, it is doubtful if Dr. Thomas N. Dulin could have been spared by his community to go to the legislative hall, no matter how great might have been the need for his aid there. But now it is different. But a man of vigorous vitality and energy it is dollars to dough nuts that he will keep up his medical practice along with his work as a legislator. And although he has no pet schemes to put over "down yonder" as most of the politicians speak of the state house he will be found working for the best interests of his county and state every minute. For the major premise of his scheme of things has ever been that "promptness and devotion to duty is the essential to success."

Waited Until Late

Most men in South Carolina who go in for personal politics and possess a penchant for office usually start early in life. Dr. Dulin didn't . From his youth he has always taken a keen interest in public affairs as a good citizen should and more especially in the welfare of his community. But never did he become a candidate for office until he had reached the mature age of 58. That was last summer when like a bolt from a clear sky he announced for a seat in the assembly. He didn't come out as the candidate of any clique or class or faction of the more or less demoralized Democracy of York. There was no previously announced declaration of intention. "Dulin just decided to do it," said his friends; 'and he did it." He went over with 2,586 votes in a field of candidates that included several who had much more political experience than he had, and in York county and in South Carolina experience ordinarily counts for right smart in politics.

Has Never Moved

Born in the Bethel community, several miles north-east of Clover, July 12, 1870, the son of the late John Dulin and Mary Jane McCullough Dulin not so far from historic old Bethel Presbyterian Church, Dr. Thomas Newton has never moved away. It is a beautiful community in which to live and an unusually fine citizenship tills the fertile fields. When he started practicing medicine thirty-six years ago most of the numerous physicians lived in the country districts. But as the towns grew in population they all moved to the more populous centers. All but him. And he has prospered. He has his office in the yard at his handsome country place. He keeps a large line of drugs and other necessities of the physican and surgeon and he fills his own prescriptions or most of them, right on the lot. He has been present at the birth of most of the babies over a wide strata of territory in the past three decades and he has attended most of the whites as well as the colored in their final illness in that long time.

After attending the common schools of his community as a youth, he later attended Fort Mill Academy in 1885. Then he went to Atlanta to study medicine at the Atlanta Medical College, graduating from there in 1892 and going back to Bethel to start the practice that has grown with the years. January 4, 1893 he

was married to Miss Mary Lillian Stanton and of this union four children survive. Some years after the death of the first Mrs. Dulin he was married to his second wife, Miss Bessie L. Garrison. That was July 12, 1921.

For Community Improvement

Seeking to improve his home community through co-operative effort of the citizenry he was in 1912 the prime mover in the organization of the Bethel Improvement Association, one of the first community organizations of its kind in the state. He served as its first president. Its aim was the improvement of all rural people along educational, agricultural, industrial and social lines. A member of the Presbyterian church since 1886 he was elected an elder at Bethel in 1900. He served as superintendent of the Sunday school for five years and in May, 1927, served as a member of the general assembly of the Presbyterian Church at Eldorado, Ark.

Prominent in Medical Society

Dr. Dulin has long been prominent in the affairs of the York County Medical Society. He served two years as its president and he served three years as councilor from the Fifth District to the South Carolina Medical Association. He also serves as chairman for Bethel township of the York County Historical Society which organization hopes some day soon to publish a complete history of a county rich in history as well as tradition.

York county, by the way, sends three physicians to the next general assembly, a fact without parallel on the part of any county in the United States so far as the record show. The other two from York are Dr. I. J. Campbell, Clover, senator-elect and Dr. David Lyle, Rock Hill. The other two are old political war-horses however, Campbell served as mayor of his town and a member of the house, while Lyle has sought the mayoralty of Rock Hill.

New Clientele for Him

But to the "country doctor" of Bethel, a man modest and quiet and unassuming, one who takes few folks into his confidence and who knows little of practical political pulling as played in South Carolina, it is a new clientele —new patients he is called upon to attend. But thirty-six years of medical practice in the same community have given him a wonderful insight into human nature, human vagaries—flips and flops and follibles.

The 2,586 citizens of York who voted for him and many more are confidently counting upon him for aid in diagnosing the case of the county and state and prescribing the remedy.

JAS. D. GRIST, The Yorkville Inquirer.

SOCIETY REPORTS

PROCEEDINGS OF THE ANNUAL MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL, TUESDAY EVENING, DECEMBER 11TH, 1928, AT 8:30 O'CLOCK.

The meeting was called to order by the President, Dr. Henry P. Jackson.

Present: Doctors: A. E. Baker; B. R. Baker; Ball; Banov; Beach; Beckman; Boette; Bowen; Bowers; Buist; Burn; Chamberlain; de Saussure; Finger; W. H. Frampton; Heidt; Jackson; F. B. Johnson; W. H. Johnson; Kollock; LaRoche; McCrady; B. K. McInnes; C. F. McInnes; Martin; Mitchell; Mood; O'Driscoll; E. F. Parker; F. L. Parker; Pearlstine; Phillips; Plowden; Prentiss; F. R. Price; Ravenel; Rhame; W. M. Rhett; Richards; Rutledge; Scharlock; Scott; J. E. Smith; Speissegger; Taft; Townsend; Waring; Wild; L. A. Wilson; Miles. (50).

Guests: The President of the South Carolina Medical Association, Dr. R. E. Hughes of Laurens, S. C.; the Secretary of the South Carolina Medical Association, Dr. Edgar A. Hines, of Seneca, S. C.; and the Chairman of the Committee on Scientific Program of the South Carolina Medical Association, Dr. Hugh Smith.

Under the heading of Unfinished Business, the President announced that he had appointed the following to serve on the Medical Milk Commission: Dr. W. M. Rhett, Chairman, Dr. Sylvia Allen, Dr. M. W. Beach, Dr. T. H. Byrnes, and Dr. G. F. Heidt.

Under Miscellaneous Business, Dr. Edward F. Parker asked that he be allowed to make a few remarks in regard to the research work now being carried on by Dr. Roe Remington, which had for its object the determination of the iodine content of South Carolina vegetables. He offered a resolution congratulating Dr. William Weston, of Columbia, who had brought the matter to the attention of the Legislature, and said that he thought the Society should send him felicitations. Dr. Robert Wilson was in favor of the resolution, and stated that Dr. William Weston had not only brought the matter to the attention of the Legislature, but through his earnestness had induced the Legislature to appropriate money for this purpose. The resolution formulated by Dr. Parker, which was unanimously adopted, is as follows:

Resolved that the Medical Society of South Carolina send its felicitations to Dr. William Weston, of Columbia, S. C., and congratulate him on the preliminary laboratory research report that the edible products raised on the soil of South Carolina have a high Iodine content as compared with that of many other States, that his unique conception was alone responsible for the appropriation by our State of money enough to test by scientific experimental methods the truth and practical value of the original idea which has brought honor to him and marked attention to his native State.

Dr. Leon Banov reported on the large number of influenza cases in Charleston, and advised the Society that the Board of Health had adopted a resolution requesting the Medical Society to appoint a committee to cooperate with the Board in the handling of the epidemic in the city. The following committee was appointed: Dr. Robert Wilson, Dr. O. B. Chamberlain, and Dr. John J. LaRoche.

A letter was read by the Secretary from the President of the Charleston branch of the Women's Auxiliary to the Medical Society, offering to help in every way possible in entertaining at the May meeting of the South Carolina Medical Association. It was moved and adopted that the Society answer by a similar courteous letter to the President of the Charleston branch of the Women's Auxiliary.

Under election of officers, the following were unanimously elected:

Secretary—Dr. W. A. Smith.

Treasurer—Dr. J. H. Cannon.

Librarian—Dr. W. C. O'Driscoll.

Member of Board of Commissioners—Dr. W. A. Smith.

Member of Board of Censors—Dr. C. W. Kollock.

Member of Board of Finance (9 years)—Dr. E. F. Parker.

Delegate to State Medical Association (5 years)—Dr. J. S. Rhame.

Alternates—Dr. M. W. Beach, Dr. W. A. Smith, Dr. J. E. Smith, Dr. D. L. Maguire, and Dr. J. J. Ravenel.

Dr. Louis S. Miles was present, and signed the constitution.

There being no further business, the Society adjourned to the Nurses' Dinning Room of the Roper Hospital, for supper and entertainment.

W. A. Smith, M. D., Secretary.

FLORENCE MEDICAL SOCIETY MEETING

The regular meeting of the Florence County Medical Society was held Tuesday night Decem-

ber 11, 1928 at The Atlantic Coastline Y. M. C. A., at 8 P. M., at which time a delightful turkey supper was served to about twenty members. After supper the meeting was called to order by the President, Dr. E. A. Simmons, Minutes of the previous meeting were read and approved. An official transfer from the Greenville County Medical Society for Dr. L. W. Wood was read; signed by the Secretary, Dr. Irving S. Barksdale, M. D. Dr. Simmons welcomed Dr. Wood's into our society and said that he knew that the society would be strengthened by his membership.

A motion by Dr. W. E. Hicks to the effect that all permanent practicing physicians in the county to pay ten dollars yearly dues; and all one year Interns to have a reduction in fees, they are to pay five dollars yearly plus actual expenses. The motion was duely seconded and passed.

Dr Julian Price of the Florence Infirmary was elected a new member pending his registration of his license.

Election of officers for the ensuing year was then entered into, the result of the election was as follows. President Dr. James McLeod. Vice President Dr. Frank Kelly, Secretary and Treasurer Dr. E. E. Herlong.

Dr. E. M. Hicks first on the program then was introduced and read a very interesting and instructive paper on Obstretics, reporting the salient features in three hundred deliveries handled by him and Dr. N. W. Hicks in the past two years. Dr. Hicks' paper was discussed by Drs. S. R. Lucas, A. G. Eaddy, W. E. Hicks, Frank Kelly, E. A. Simmons, Frank Rhodes, and Dr. Jas. McLeod, Dr. Hicks closing the discussion. His paper was very interesting and enjoyed by all present.

Dr. R. E. Lee next on the program sent in his regrets, stating that he was at home in the bed with Influenza. All extended sympathy.

Dr. A. G. Eaddy made a motion to the effect that the President and Secretary, of the society write all Quacks' and parties who were illegally engaged in the practice of medicine in Florence County and warn them, and if they continued, to report the matter to the Grand Jury or to those who were in a position to put a stop to the malady. The name of Mrs. Lee McDaniel, Jr., of Hemmingway, S. C., R. F. D., was given in as practicing medicine without a degree or any license whatsoever. The doctors think this should be stopped from a humanitarian stand point if for no other reason.

Those present at the meeting were: Drs. E. A. Simmons, Jas. McLeod, A. G. Eaddy, E. M. Hicks, L. B. Salters, W. E. Hicks, C. L. Guyton, L. W. Wood, J. L. Davenport, Percy Hay, O. T. Finklea, Julian Price, L. M. Lide, A. M. Eaddy. M. R. Mobley, and E. E. Herlong.

There being no further business the society was adjourned.

Respectfully submitted,
E. E. Herlong, Secretary.

REGULAR MONTHLY MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY HELD AT THE IMPERIAL HOTEL, MONDAY, DECEMBER 3, 1928.

The meeting was called to order by the President, Dr. Johnston, at 8:30 P. M., with about 25 members present.

The minutes of the last meeting were not read on account of the full program.

Reports of clinical cases were then called for. Dr. Pollitzer reported a case of chorea minor which did not respond to magnesium sulphate therapy.

There being no further clinical cases to report, the President then called upon Dr. R. M. Pollitzer, the speaker of the evening. Dr. Pollitzer gave an excellent talk on his experience with the prevention and modification of measles infection, stating first that it was one of the most communicable of the infectious diseases known to medical science. He further stated that too little attention has been paid to it both by profession and the laity, also that there has been a great deal of talk about the subject and too little action taken by all concerned.

The speaker then gave a very exhaustive resume of work done on the aetiology of the disease, stating that the Italian work has not been corroborated, and that all of Tunnicliffe's work has as yet, yielded no preventive or curative serum.

As is commonly known, one attack confers a lasting immunity. Reports of recurring measles in individuals was thought, by the essayist to be due to mistaken diagnoses. Infants under six months of age enjoy an immunity doubtless contracted from the mother, which is lost after the child is eight months of age. We were also informed that measles causes 1 per cent of all the deaths from infectious, communicable diseases, with a mortality of 4-6 per cent. In hospitals, the mortality is much higher amounting to something like 20-50 per cent. Four per cent of the children develop pneumonia following measles and 3.5 per cent develop otitis media. Measles is most readily communicable two days before and two days after the eruption.

Dr. Pollitzer then stated that there was no drug or serum on the market that was of value that the French had reported fairly successful data regarding the use of convalescent serum in the prevention of the disease. Three per cent of people are naturally immune to measles. Park and Zingher carried out some investiga-

tions of this nature and were convinced. Adult blood serum has been used in the prevention and treatment of measles with some success, however, two or three times as much adult serum should be used as the convalescent. Parental blood is the most easily obtained, and Bivens in a series of 23 cases prevented measles in 14 and modified measles in the remaining 9 cases of his series. Dr. Pollitzer then added that the adult blood should be given before the 4th day following the exposure to prevent the disease and before the 7th day to modify. Dr. Pollitzer impressed upon us that the modification of measles was the method of choice, because modified measles produces permanent immunity, whereas protection against measles by the above methods produces only a temporary immunity which soon wears off. If there are outstanding reasons why a child should not have measles, the physicans should endeavor to prevent it by giving the immune adult serum before the 4th day following the child's exposure. A long incubation period is characteristic of modified measles. Dr. Pollitzer tnen stated that the advantage of the administration of human serum is that there is no serum sickness which follows it.

The speaker then presented several of his cases which gave some evidence that adult serum of people who had had measles had its place in the prevention, modification and treatment of the disease. Discussed by Drs. Curran B. Earle, C. O. Bates, Houston and Wilkinson; closed by Dr. Pollitzer.

With the completion of the scientific program the election of officers was declared in order.

Dr. C. O. Bates nominated Dr. Murray; it was moved, seconded and carried that the nominations be closed, and Dr. Murray was elected by acclamation.

Dr. W. T. Brockman was nominated Vice-President; it was moved seconded and carried that nominations be closed, and Dr. Brockman was elected by acclamation.

Dr. Barksdale was nominated Secretary; it was moved, seconded and carried that nominations be closed, and Dr. Barksdale was elected by acclamation.

Dr. Hugh Smith was nominated Treasurer; it was moved, seconded and carried that nominations be closed, and Dr. Smith was elected by acclamation.

The election of delegates and their alternates then followed. Dr. Houston was nominated by Dr. Curran B. Earle; Dr. Brown was nominated by Dr. Bates; Dr. Anderson was nominated by Dr. Tyler; it was moved, seconded and carried that nominations be closed, and Drs. Houston, Brown and Anderson were elected by acclamation.

Dr. Curran B. Earle moved that the delegates be authorized to appoint their own alternates; seconded and carried.

There being no further business the meeting was declared adjourned. A very delightful buffet supper was served by the Hotel Management.

Irving S. Barksdale, M. D., Secretary.

RIDGE MEDICAL SOCIETY MEETING

The Ridge Medical Society met December 17, at seven o'clock p. m., with a larger attendance than usual.

Dr. W. T. Gibson reported a case of possible purpura which ended fatally in two days. This was discussed by Dr. W. P. Timmerman who also saw it.

Dr. W. W. Moloney read a paper on Vincent's Angina which was discussed by Drs. Blake and Barron.

Dr. R. M. Fuller of Greenwood gave some case reports of abortions and ruptured tubal pregnancies which elicited considerable discussions.

Dr. Dotterer of Columbia read a paper on the pre and post natal care of mothers which caused favorable comment and questions, etc. Resolutions of regret over the early removal of Dr. W. T. Gibson and family of Batesburg to Bailey, North Carolina were unanimously passed. Since our meeting Dr. Gibson and family have moved to Bailey, N. C. Dr. Gibson had been here for about eighteen years and was highly esteemed as physician and citizen.

Supper was served in the Commerical Hotel whero most of those present had something interesting and cheerful to say and Dr. Gibson made his parting remarks and all wishing him Bon Voyage.

Ono of our Vice presidents, Dr. James Crosson of Leesville and Miss Josephine Copeland of Ehrhardt were married the twentieth of December 1928.

W. P. Timmerman, M. D., Reporter.

PEDIATRIC SOCIETY HOLDS ANNUAL MEETING JANUARY 15, 1929

Cordial indorsement of the investigations carried on by the food analysis commission and declaration that it "stands ready to support in the name of the children of South Carolina and of the United States" were set forth in resolutions adopted yesterday at the annual meeting of the South Carolina Pediatric society, held at the Medical building. The resolutions also set forth that "the funds appropriated by the legislature for this work we believe will be of inestimable benefit to South Carolina from an economic standpoint."

The preamble to the resolution, offered by Dr. D. F. Smith, Spartanburg: was, "Whereas, Dr. William Weston, one of the distinguished members of the Pediatric society, has brought to the attention of the world the relatively high iodine content of South Carolina grown products and thereby added tremendously to the scientific discoveries in the domain of nutrition," and then follows the resolution indorsing the work of the food analysis group.

The meeting was presided over by Dr. C. W. Bailey, Spartanburg, president, and after clinics by Dr. William Weston, Jr., chairman of the clinic committee, case reports were made by Doctor Bailey, Dr. E. W. Barron, Columbia; Dr. W. E. Simpson, Rock Hill; Dr. William Fewell, Greenville.

At the business session Dr. E. A. Hines, Seneca, was elected president; Dr. T. D. Dotterer, Columbia, vice president; Dr. R. M. Pollitzer, Greenville, secretary and treasurer, re-elected.

After luncheon at the Jefferson, papers were submitted by Dr. J. B. Sidbury, Wilmington, N. C., Dr. J. I. Waring, Charleston, and Dr. H. D. Wolfe, Greenville.

The society will hold its next meeting next January in Columbia.—The State.



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LEPROSY IN UNITED STATES

Ralph Hopkins and Oswald E. Denney, Carville, La. (*Journal A. M. A., Jan.* 19, 1929), have made a statistical study of 718 lepers hospitalized over a period of thirty-four years in the Louisiana Leper Home—later the National Leprosarium. Two hundred and fifteen were foreign born and 503 were natives of the United States. The present population of the hospital is 287. Mexico, China, Italy, Greece and the Philippine Islands have furnished one half of the total foreign born. Most of the lepers came from Louisiana, California, New York, Texas and Florida; 418 came from Louisiana. The incidence of leprosy among the white population of Louisiana is computed as twice that in the negro population. Of the total cases, 11.0 per cent were of the nerve type., 39.1 per cent of the skin type, and 49.9 per cent of the mixed type. Of the total cases, 72.3 per cent were in males and 27.7 per cent were in females. The social status of the patients represents a cross-section of the normal populace. The average age at onset of the disease is computed at 30.2 years; the average age on admission to the hospital was 36 years, with an average period of six years prior to admission during which each patient may have been a menace to public health. In a group of 100 Louisiana lepers, hospitalized more than fifteen years ago, it has been disclosed from subsequent records that in sixty-four instances only one leper in the family developed the disease, while in the thirty-six other instances leprosy occured in eighty-three additional relatives. In some familes the disease has invaded certain branches to the point of extermination. Instances of familial transmission have also been noted in cases from other states than Louisiana. It has not invariably happened that the parent became infected before the child; indeed, the reverse frequently occurred. Intimate contact over a period of time extending into years has been concurrent in most instances of familial transmission; in many cases, multiple contacts also existed. In five cases, the incubation period is calculated as not less than six years. The first manifestation of leprosy was recalled by most patients as one or more spots appearing on the face; in no instance were conditions described that might be identified as prodromal symptoms or as the initial lesion of leprosy. Aside from the increased number of cases developing in males at about 21 and in females at about 19, and the counterbalancing rarity of leprosy before the age of 9, the disease appears to manifest itself at all ages about equally. The duration of leprosy is computed as approximately fourteen years. It appears that leprosy greatly shortens the life expectancy of the young but has less effect on the life expectancy of the aged. The mortality rate has gradually decreased in the hospital since its organization. Leprosy per se has been the cause of death in less than 20 per cent of the lepers; respiratory, renal and cardiac disorders indirectly dependent on leprosy have caused more than half the deaths. Before rigid rules for paroles were promulgated, relapses in discharged patients were not uncommon; but in the last seven and one-half years, twenty-eight lepers have been paroled and only one has suffered a relapse and been readmitted.

RENAL, BACK PRESSURE

Henry A. R. Kreutzmann, San Francisco (*Journal A. M. A.*, Jan. 19, 1929), concludes that the cause of upper urinary tract dilatation in obstructive lesions of the bladder neck and urethra in adults is a stenosis of the intramural portion of the ureter. This constriction is due to hypertrophy of the bladder muscle. When reflux is present, the increased intravesical pressure tends to keep the upper urinary tract dilated to its maximum. After removal of the urethral obstruction, the bladder wall loses its hypertrophy, the stenosis disappears, drainage is improved, and the ureters and kidney pelves return to normal.

STALKING THE FOOD FADDIST

It is time for common sense, aided by sane medical and scientific opinion, to put an end to dangerous dieting fads.



EMINENT doctors of medicine are making it hard for the food faddist to maintain his hold on the credulity of the American public. Dr. Morris Fishbein, in "Your Weight and How to Control It," says: "Of all the fads which have afflicted mankind, none seems more difficult to explain than the desire of American women for the barber-pole figure." Other authorities, in the same volume, warn of the permanent injury likely to result from starvation diets.

Dr. Solomon Strouse, Associate Professor of Medicine at Rush Medical College, in his address at the New York Academy of Medicine, as quoted by the *Evening World,* said: "I am beginning seriously to wonder whether scientific efforts at diet control based on animal experiment are not overshooting the mark; whether we are not interpreting the life of a caged white rat rather too seriously for the comfort of a free white man." He went on to say that "food and food habits in general play no important role in the attainment of longevity. . . . Despite much that I read of the evils of the modern way of eating and living, I find in actual practice comparatively few examples of excessive food indulgence to the point of harm. . . . It is possible to conceive of undernutrition causing more trouble than overeating."

The trend of modern dieting thought is that human beings should not only eat a variety of healthful foods, but enjoy them. It is a well-known fact of human psychology that few people will force themselves very long to eat foods that they do not like. As a food scientist says, "It is sugar which makes it possible for us to eat and enjoy the roughage foods, the vitamine foods, and foods rich in mineral salts." Fruit flavors are developed by sugar. Sugar facilitates the ingestion of fruits, cereals and vegetables.

An eminent biological chemist refers to sugar as "Nature's incomparable flavoring agent." "Sugar," he says, "is the thing which makes the deadly dullness of our overly refined foods palatable. Another thing, it is wholesome."

It is time for common sense, aided by sane medical and scientific opinion, to put an end to dangerous dieting fads. There is no substitute for sugar in the diet. It has its needed place. Appetizing cookery revolves around sugar. The Sugar Institute, 129 Front Street, New York.

The Journal

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EDITORIAL

THE SIM'S MEMORIAL NEARS COMPLETION

As will be noted under the Woman's Auxiliary Department of the Journal the total funds collected from all sources for the erection of a Memorial to Dr. J. Marion Sims, the pre-eminent surgeon born in South Carolina and honored throughout the world, amounts to six thousand, seven hundred and twenty-eight dollars and twenty-two cents. Contributions continue to come in and are very acceptable as will be noted in the report of the Treasurer. While the original goal was set at ten thousand dollars, nevertheless it is believed that by fortunate contracts and wise leadership the finished Memorial to be placed on the State House grounds in Columbia will prove to be satisfactory from every standpoint. The Woman's Auxiliary and the South Carolina Medical Association are to be heartily congratulated on the splendid results attained in the prosecution of the campaign. When finally unveiled and with befitting ceremonies the achievement will stand before the world as one to be honored and emulated wherever scientific ideals and the alleviation of human suffering are found. It is worthy of deserved recognition that many lay friends took an abiding interest in the proposition as time progressed and contributed liberally toward the consummation of the purpose in hand.

TITLES OF PAPERS COMING IN

Since the publication of the notice to the effect that the Scientific Committee was ready to receive titles of papers to be read before the State Medical Association meeting, May 7, 8, and 9, some ten or twelve have been received. The program will be limited to twenty papers with the major part of the meeting in Charleston devoted to clinics. It is highly desirable that members intending to submit

titles should do so at the earliest possible moment in order that the Scientific Committee may have ample time to plan the grouping of the papers and also to provide for discussion on them. The latter feature has been significant accomplishment of the meetings in recent years. The officers have seen to it that able men are invited to discuss papers and that they be provided with suitable abstracts long enough before-hand to insure careful deliberation as to what they are going to say. Such a course adds tremendously to the solidarity of any scientific program and gives assurance to the membership that nothing has been left undone to make a complete well rounded meeting. As time has gone on the Scientific Committee endeavored to bring about greater limitation of the volume of papers read but an increase of the discussions on the floor. It is gratifying that so many members have approved of this plan. In addition an enlarging scope of clinics has been in the minds of the officers of the Association to be very greatly amplified at the Charleston meeting.

SPARTANBURG SOCIETY HAS SPLENDID MEETING

The Secretary-Editor attended the first meeting of the year of the Spartanburg County Medical Society and found the members enthusiastic over the outlook for the year 1929. Dr. Sam Orr Black is the new President and Dr. W. M. Sheridan the new Secretary-Treasurer. This Society has about sixty members at the present time with an eligible list approximating one hundred doctors. A campaign for new members will shortly be inaugurated and the Officers of the State Association will take part in the publicity details. This Society meets regularly in the magnificent General Hospital. We publish elsewhere a report of the January meeting and wish to call attention to the admirable papers read and particularly to the very practical discussions all indicating that the Spartanburg profession is keenly alive to the progressive ideas in the care of sick. The Society will have a great meeting in March to which there will be a large number of physicians from surrounding counties invited. A distinguished surgeon from another State who has had an unusually large experience in industrial surgery will be the guest of the Society. Other features, of course, will add to the keen interest of the occasion.

DEATH OF DR. W. A. WALLACE

The untimely death of Dr. W. A. Wallace of Spartanburg removes one of the well known and active practitioners in the upper part of the State. Dr. Wallace has been honored by the Spartanburg County Medical Society at different times and in 1927 was President. Dr. Wallace was a comparatively young man, only forty-seven years old, at the very zenith of his usefulness as a professional man and as a citizen. The South Carolina Medical Association thus sustains a keen loss in the passing of one of its very promising and active members.

PAYMENT OF DUES

The fiscal year of the State Medical Association closes December 31. It is highly desirable that dues be paid as promptly as possible before the State meeting. Kershaw County has often been the first to send in dues in the New Year and we are glad to announce has done so this year. It should be recognized that the members owe a duty to the Officers of the County Medical Society to respond with reasonable promptness to the calls for payment of dues. Most of the Secretaries and Treasurers are very busy men and if the members consider this fact and pay their dues early in the year the entire machinery of the County and State organizations will move forward more smoothly and efficiently than otherwise would be the case. It must be said greatly to the credit of the South Carolina profession that there has been little trouble on this score. There are each year a number of delinquents who with a little forethought might avoid dropping out of the paid up class. Practically none of them intend to let their dues drop so even if the Secretary fails to make urgent and repeated requests such members should send their checks to the local officer and thus keep in good standing. For the most part the Secretary-Treasurers of the County Medical

Societies in South Carolina are a splendid body of willing workers as is evidenced by the fact that very few changes occur when the time for election comes around. We should therefore cooperate to the fullest extent in helping these officers carry on their official duties.

ORIGINAL ARTICLES

*TREATMENT OF CANCER

By J. Richard Allison, M. D., Columbia, S. C.

The treatment of cancer is a subject far too large to be covered thoroughly in all it's details in a paper of this type. We will confine our discussion, therefore, to an outline and criticism of the average physician's knowledge of cancer and it's treatment, in contrast to the most progressive and accepted methods of the leading men of the world who are treating cancer.

The American Society for the control of cancer in it's propaganda work has done much to further the advancement of cancer therapy; their aim is to teach the public that the most effective way of dealing with cancer at the present time is based upon the fact that it is to some extent preventable and in it's early stages curable. In other words we are still limited in our efforts in the control of cancer, to it's early diagnosis and early treatment. To send cancer patients to the physician is only a part of the society's aim. They also propose to instruct the physician as to the best method to pursue in the treatment of cancer.

There has been found among the average physician a woeful ignorance and pessimism on the subject of cancer therapy. A certain group think that all cancer patients are doomed to die—they are not interested in precancerous lesions and the best methods of their removal—they are apt to advise their patients to leave well enough alone, that interference may cause trouble. This pessimistic attitude of the physician is the greatest single factor in the continued prosperity of the cancer quack, for these reasons, his headlines—"curing cancer without the knife" or "take it out by the roots" still flourishes. The physicians therefore who are pessimistic and without the proper knowledge of the present status of cancer therapy are indirectly lending aid to the cancer quack. Another fact which has contributed to this ignorance and pessimism has been the great difficulty experienced by the general practitioner and internist in arriving at any exact knowledge of the results of cancer therapy because of the conflicting claims of those treating cancer. We come now to the criticisms of those treating cancer.

Since the introduction of x-ray and radium in the treatment of cancer more than 25 years ago, there has been a continued controversy between radiologists and surgeons as to the best method of treatment. In an effort to eliminate this controversy national and international conferences have been held, as for example, the Lake Mohonk Conference, where the leading Cancer Specialists of the world gathered for a free exchange of ideas and experience. Such efforts have shown that much can be done to advance cancer therapy by dissemination of knowledge and the proper cooperation of those treating cancer. Information and conclusions from such sources should be our guide in the future. Do not be guided by the surgeon who resents the fact that radiologists and dermatologists have taken a great portion of the cancer cases from him; who treats all cancers by surgery; who refuses to combine both methods where indicated; who operates on inoperable cancers for surgical experience and surgical fees; and who increases his cancer mortality and human suffering by operating on hopeless cases that should receive palliative treatment with other methods. Such surgeons are a distinct detriment to cancer therapy and causes cancer patients to fall into the hands of cancer quacks. Dr. Mayo says "that the proper treatment of cancer depends

*Read before the South Carolina Medical Association, April 18, 1928, Columbia, S. C.

on the combined efforts of the surgeon, the radiologist, and the pathologist, in evolving methods adapted to each patient rather than adapting all patients to one method of treatment."

On the other hand equal criticism can be laid to the dermatologist and radiologist. The introduction of radium and x-ray in the treat ment of cancer was soon followed by claims of wonderful cures by these agents. For 25 years there has been a constant controversy as to their real value. The extravagant claims of x-ray men have been of first importance in prolonging and intensifying this controvery. For this reason many surgeons refused to accept these agents, simply because they could not work with, or countenance the methods and claims of the radiologists. In many instances the method of treatment in the past has been decided entirely by whether or not they fall into the hands of the radiologists or the surgeons, and not by intelligent and thoughtful study as to the best method of treatment. There has evolved gradually from this mass of controversy and conflicting claims a better understanding and more cooperation between the surgeon and the radiologist. The combined efforts of cancer conferences, propaganda societies, and large research institutions, together with more reliable statistics from radiologists, and the increasing knowledge of the dosage and limitations of x-ray and radium, all have been conducive to a better understanding of the problem. The leaders therefore in cancer therapy are concluding that each has it's place, and you are advised to take your cancer patient to the man who is best equipped and trained to treat cancer according to these advanced ideas; avoid the narrow minded and prejudiced physician, whether he be Dermatologist, Radiologist, or Surgeon.

Other methods are being studied by research workers in the cancer problem. Our present accepted methods are all purely destructive and depend upon early diagnosis, localized cancer, and the possibility of the entire removal of the cancer tissue. The method of research by Dr. Slye, that is attempting to approach the problem from an immunization standpoint may be the final word in cancer. She has been successful in breeding animals who are immune to cancer under the most unfavorable conditions. The Blair Bell method of treating cancer with colloidal lead has a possibility, but is still in the experimental stage. This method must await the discovery of a less toxic lead preparation as the treatment of syphilis by arsenic was delayed until the discovery of 606. Dr. Gye's work in London on the filtrable virus which he has discovered as the cause of certain animal cancers, is another possibility. Other methods and sources of information that are being studied by cancer research workers are of interest to us, but only of interest in the hope that they may ultimately find the cause and cure of cancer and not that we should accept their methods while still in the experimental stage. In the meantime avoid the wonderful methods of your doctor neighbor or friend who has a wonderful cancer cure, discovered and practiced by himself alone; if he knew as much about cancer as he claims to know he would not be your neighbor, he would be in some large cancer research institution. The known and accepted methods then of treating cancer are by surgery, x-ray, radium, and electro-thermic destruction. A brief outline in a general way will now be attempted.

Cancer of the skin: The majority of these cancers are not very malignant, especially the basal celled cancers. Moles, warts, keratosis, and benign cutaneous growths are considered precancerous lesions and are left to the dermatologist to treat with very few objections. The Dermatologists have a better understanding of such lesions and are more apt to see them in their early stages. Practically all the statistics on such types of lesions reported today are by Dermatologists and Radiologists, which goes to prove that among the leaders there is not much controversy in the treatment of these lesions. The leading Dermatologists report practically 95% cures with x-ray, radium and electro-thermic methods; the details and methods of treatment will not be attempted in this paper. The squamous celled cancers are the malignant ones and cancers of the mucocutaneous areas and mucus membranes proper, such as the lips, tongue, mouth, eyelids, and other areas are still more or less in the controversial stage. The Radiologists and Dermatologists are almost without excep-

tion claiming that these conditions are best treated by them in the early stages. When localized they claim that with their destructive methods there is less mortality, less scar formations, and less chance of disseminating the cancer cells. any leading surgeons today are having such cancers treated by these methods; there are still surgeons, however, who perform extensive operations for cancers of the lower lip, extensive and mutilating operations for cancers of the mouth and tongue, while other surgeons themselves use or have someone else use electro-thermic methods, in combination with x-ray or radium. Where there is evidence of metastasis, local destruction with blocking dissection of the involved regions is generally practiced. No set rule, however, can be followed. The method in each particular should be decided jointly by the surgeon and radiologist. Also cooperation in such cases can save much suffering, and distinctly enhance cancer therapy. The surgeon and radiologist who do not work together naturally are not suited to treat cases in which the exact method must be decided in each individual case. Patronize those, therefore who are willing to cooperate in finding the best method for the patient and not for the doctor.

Cancer of the breast pre-eminently belongs to surgery. It is believed that the majority of the surgeons today advise post-operative x-ray therapy, especially in those cases which have glandular involvement. Dr. Mayo says "we use radiotherapy after operation in those cases in which it is suspected that the growth has not been thoroughly removed." Dr. Francis Carter Wood says "that he has never seen a skin recurrence of the cancer of the breast following surgery that had been properly radiated. Also in deep and mediastinal metastasis while the patient is not cured, x-ray should be employed, for often an astonishing amount of comfort and apparent prolongation of life is obtained, even in those cases of pleural involvement, shown by the presence of recurring hemorrhagic exudate."

Cancer of the stomach, intestines, and all internal cancers belong to surgery. It is a question to be decided in each individual case, whether or not x-ray is to be used following surgery. It is the duty of the surgeon to maintain an unprejudiced mind as to the place of the x-ray in these cases. The best of opinions seem to be willing to give deep x-ray therapy a place in the treatment of these cases, but is opposed to the general use of deep therapy to the exclusion of surgery. The great wave of enthusiasm originating in Germany several years ago in which extravagant claims were made for deep x-ray therapy has not flourished in this country. Without going into the details and conclusions of what deep therapy can do we can conclude with other authorities that it has a place in certain types of cancer and in such cases should be employed at the instigation of surgery. It is well known that certain types of cancers, particularly the extreme cellular type, as for example, endotheliomata and lympho-sarcomata, and many of the sarcomas of the bone all of which are usually considered poor surgical risks are very susceptible to radiation. Wood says, "that the surgical radiation system of these borderline cases is a question that must be answered individually and entirely by the situation and nature of the cancer, and by the facilities that are at hand for their treatment." Deep x-ray therapy therefore has it's place in the treatment of many internal cancers.

In cancer of the cervix, the majority of opinions I believe favor radium needles followed by general x-ray. Cancer of the body of the uterus should be treated surgically followed by x-ray. Cancer of the bladder is also accessible to radium and fulguration, and many cases are being successfully treated by these methods. In this day of extreme specialization, cancers of different locations are first discovered by specialists. Specialists of all branches of medicine should be well informed of the early signs of cancer in their particular fields. If not equipped to carry on the proper method of treatment, they should at least be honest enough to turn over the treatment to those who are equipped. Cancer of the bladder for instance—many cases are being treated successfully by urologists with radium and fulguration. Eminent urological surgeons, like Dr. Squires of New York reports as high as 33% 5 year cures by extensive resection of the bladder. The ordinary urologist and the ordinary general surgeon in all probability,

cannot claim such wonderful results. In such cases the best method at hand should be used, which in many instances is radium and fulguration.

It is seen from the above brief outline that a few of the cancers have an accepted method of treatment definitely decided by the majority of leading men practicing cancer therapy, and that on the other hand there is a group of border-line cases about which there is still much controversy. Dr. Semken, Surgeon of the New York Skin and Cancer Hospital, says "in your advice to the cancer patient, you have two guides. One is an adequate knowledge of cancer-experience so that he may know what each method of treatment has implied and how rational is its bases; the other guide is his conscience." Unfortunately he says, "frequently neither of these guides are consulted." He condemns strongly radiological treatment of cancer that could be successfully removed by surgery, and on the other hand he equally condemns operations on inoperable cancers that should be treated palliatively by x-ray and radium.

I come now to the end of my argument. In your criticisms of this paper, please bear in mind the object as stated in the beginning, that it is a plea for the proper understanding and coordination of the known methods at hand and as practiced by real cancer specialists.

DISCUSSION

Dr. R. B. Taft, Charleston: Dr. Allison has chosen an enormous subject, and I think he has covered the matter excellently. He has said there is a great deal of controversy between surgeons and roentgenologists in regard to the treatment of cancer. I am one of the few roentgenologists who have very little contest with the surgeons. I believe surgery is the best treatment for cancer, in the majority of cases. Of course, I have to modify that statement. In these little cancers on the face, on the lip, etc., I think radiation is the better treatment; and in deep-seated cancer of the stomach, esophagus, etc., radiation offers a very good chance either of arresting the disease or at least of stopping the pain. Radiation therapy has been in use just about my lifetime. One peculiar fact may be noticed; the results obtained ten or fifteen or twenty years ago were just as good as we get now. What is the explanation of that? It is that once in a while, just by chance, we are hitting upon the right kind of radiation for the particular kind of lesion. The radium rays and x-rays are made up of many different kinds of beams packed up in one bunch. Probably each one of these rays has its effect on a particular type of carcinoma, and it is only by elaborate experiment and research that we shall be able to differentiate. Rather than spend too much time theorizing, however, I think we shall do better now to concentrate our efforts on these two methods, choosing which seems to be the rational one and remembering, as Dr. Allison brought out, that there is no one rule by which we can solve this problem of a disease which for many thousands of years has jeopardized the human race.

Dr. James S. Fouche, Columbia: I think "A plea for cooperation in the treatment of cancers" would be a more appropriate title for Dr. Allison's paper. It is an extremely timely subject for those of us who do not take any part in the treatment of these unfortunates but who like to feel that we are directing our patients in the right channels for the particular type of malignancy. I can not help but feel that the one who treats all cancers by the same method deserves the title of "cancer specialist," which to my mind (as well as to many others, I think) denotes narrowness, selfishness, and quackery, whether he be radiologist, dermatologist, or surgeon. I think this is the important lesson taught us by this paper; and I think it is very important that the internist, at least, should familiarize himself with the value of each type of treatment that can be adapted to the individual case at hand, that he may intelligently advise his patient the course to pursue, whether it be surgery, radium, or x-ray. If either one of those methods would cure all cancers regardless of type or location, then the last word would have been said in the treatment of cancer; and further discussion would be superfluous. Unfortunately, this is not the case. But all these methods have their place; and, as Dr. Allison has well said, the type of treatment must be adapted to the individual patient and not the patient to the individual treatment.

Dr. Arthur W. Browning, Elloree: With all these specialists talking I feel a little timid, but for the last thirty-five years I have heard this subject discussed. It has been said that the great majority of deaths from cancer may be laid at the door of the physician—not the family physician, notice. It is a question of education, and I think it is the concensus of opinion that the best way to cure cancer is to remove it before it becomes cancer. Do not temporize. When I was at the Mayo Clinic I heard Dr. Mayo so state. Now, my friends, these men got me a little balled up here talking about treating cancer. Let's not have to treat it; get them out, remove them be-

fore they become cancers—tell your patient honestly that the growths—ulcers, etc., may become cancerous and urge them to have them removed.

Dr. W. L. A. Wellbrock, Mayo Clinic, Rochester, Minn.: I enjoyed Dr. Allison's paper, and it seems to me that all through it he is emphasizing early diagnosis. I think today the greatest need in the cancer problem is its early recognition. Dr. MacCarty, of the Mayo Clinic, has been for many years stressing the need for early diagnosis and especially emphasizes it in the relationship of chronic gastric ulcer to cancer of the stomach. If the malignant tumor is recognized early, before any glandular involvement has taken place, certainly the prognosis is much better. Early cancer or malignant change is best recognized in fresh tissue, which makes it necessary for the pathologist to have his laboratory near the operating room, where he can act in the capacity of consultant in treatment of the case.

Dr. McLeod talked in his discussion of the value of grading cancer according to Broders of the Mayo Clinic. This grading is based chiefly on the cellular differentiation; that is, the nearer the larger number of cells approach the normal cell in appearance, the lower the grade; the larger the number which show the least amount of differentiation, the higher the degree of malignancy. The grading is on a basis of 1 to 4. In certain localities cancers are usually of the higher grade, as in the cervix, which is usually grade 3 or 4; the breast and rectum are usually grade 2. By the grading of cancer an attempt is made to prognosticate and direct treatment.

Dr. T. M. Davis, Greenville: I want to express my appreciation to Dr. Allison for his paper. The cancers of the bladder that I have seen have always come to me late, because the general practitioner has always treated them as cystitis for a considerable length of time, with medication and sometimes irrigation; and when they are referred he is surprised to learn that they are malignant. That should warn the general practitioner, when cystitis cases do not respond in a very short time, that he should have them examined, because some of them are malignant conditions. Dr. Keyes, Dr. Allison states, is having wonderful results from resection of the bladder. The cases that I have seen it would be impossible to treat with resection, unless we transplanted the ureters, for they are around the ureteral orifice. The ones I see in this part of the country are not amenable to resection.

Bumpass, of the Mayo Clinic, in Surgery, Gynecology and Obstetrics, August, 1926, reported a series of cases in which the expectancy of life in patients with carcinoma of the prostate gland was eighteen or thirty-six months longer where the prostate was not removed and suprapubic drainage done than where it was removed. Those cases in which it was removed died of carcinomatosis. After they reach the stage at which you can make a diagnosis it is far better to resect to relieve obstetrics and use irridation.

Dr. James McLeod, Florence: I think Dr. Allison is to be commended for bringing this all-important question to our attention and for giving us a good, brief summary of the present most acceptable methods of treatment. I believe one of the chief keynotes in the cancer problem at the present time is that of education, and by education I mean education of the public and likewise education of the doctors. In proportion as this is accomplished will results be achieved. We are seeing in our clinics far too many advanced cases of cancer. We are seeing more early cases than formerly, but not as many as we should.

I do not believe there is a problem in medicine where a more earnest cooperation is needed between the pathologist, the radioligist, and the surgeon than in the treatment of cancer. The role of the pathologist is highly important, and his opinion should be the foundation upon which the efforts of the surgeon and radiologist are based. Such a study should be had wherever it is practical to obtain a biopsy. The pathologist now has a method of grading malignancy according to the percentage of undifferentiated cells present microscopically. The more undifferentiated cells present the higher the degree of malignancy. This is of great benefit in determining the method and vigor of attack. Broders outlined this classification and I feel that it is of distinct value.

Time will not permit me to go into detail, but I should like to say that the cancer problem resolves itself at the present time into education; and the need is for early diagnosis. I think it is by such papers as the one Dr. Allison has read that this will be accomplished.

Dr. Allison, closing the discussion: I have nothing further to add. I feel the paper has attained the object for which it was written, and that was to stimulate discussion on the coordination of cancer therapy. To impress on the general practitioners, the surgeons, and the internists the importance of coordination and early treatment.

*VINCENT'S INFECTION OF THE MOUTH AND THROAT

By F. M. Routh, M. D., Columbia, S. C.

In 1896, Vincent described a pathological condition occurring in the throat that has since been designated as Vincent's Angina. In this condition, he found constantly present, two morphologically different organisms, the Fusiform Bacillus (cigar-shaped), and a Spirillum, since called the Spirillum of Vincent. Morphological and cultural characteristics may be found in any standard text book on bacteriology. Vincent noted the presence of the above organisms in cases of hospital gangrene as well as in Vincent's Angina. Castelinni reported spirochetal infections of the lungs as early as 1906. Buday of Hungary, 1910, and Arnheim of Germany, 1911, found these organisms in lung abscesses and pulmonary gangrene. No other advances were made in the study of this disease until the World War, when its prevalence was enormously increased among the French and British troops, manifesting itself more as a Gingivitis than an Angina. This infection became popularly known as "Trench Mouth."

The disease was practically unknown in this Country until after the World War. Tunnecliff in 1906, maintained that the Fusiform Bacillus and Spirillum, were the same organism in different stages of development. Other bacteriologists take issue with this statement and the question is still unsettled. Sequin and Krichewski of Paris, in 1920, took scrapings from buccal lesions and injected material into Guinea pigs, producing lesions and recovering Fusiform Bacilli and Spirilla. Neither of these organisms would produce disease when injected alone. This would seem to be at variance with Tunnecliff's views.

Kline of Cleveland recovered the organisms from pulmonary gangrene, and Kline and Berger from pulmonary abscesses, associated with metastatic brain abscesses; also, in cases of unresolved pneumonia.

Reasoner and Gill report osteomyelitis of the inferior maxillae. Genito-urinary lesions have been reported by Brams and Pilot. Gangrenous infection of the finger in infected persons, by biting the nails, has been reported by Hultgen. Fullwider of Colorado has reported two fatal cases. One a pericarditis, the other involving the larynx, trachea, eosophagus, and stomach.

Pilot and Davis of Chicago, and David T. Smith of Ray Brook, N. Y., have recovered the organisms from pulmonary abscesses, pulmonary gangrene, and bronchiectasis. Smith has found Fusiform Bacilli, Spirilla, Vibrios and Cocci growing anaerobically always associated in these cases. He has produced pulmonary lesions in mice and Guinea pigs by intra-tracheal injections of washed sputum; also from material scraped from the alveolar border of teeth in moderately severe pyorrhoea. The offending organisms have been found associated in traumatic injuries, and pathology caused by tuberculosis, syphilis, cancer and diabetes, and other debilitating diseases. Smith and Pilot and Davis believe that this infection is the etiological factor in bronchiectasis.

The above historical resume is mentioned to give you an idea of the potentialities involved in Vincent's infections. In practically all these pathological entities, the observers have reported finding the organisms in the mouth. That we have mild cases and severe ones, no one will argue. Some writers have mentioned carriers. I do not believe that this infection is ever found in a normal mouth. Certainly, we have mild cases, but there is pathology. Bloodgood has made the statement that he has never found the organisms in the mouths of patients whose teeth and tonsils have been removed. This would indicate that the gums and tonsils afford opportunities for these germs to thrive.

SYMPTOMS: Mild cases are usually seen first by dentists. Burning mouth, sore gums, red gums, spongy, bleeding gums after brushing teeth, characteristic foul breath. Some of these cases may not have any perceptible symptoms, but are discovered in routine dental examinations. This type of case is sometimes referred to as a carrier. There is usually lassitude and some loss of appetite.

MODERATELY SEVERE CASES: The above symptoms are intensified. There may

*Read before the District Dental Society at Columbia, S. C., October 4, 1928.

be ulcerations of the gums, tonsils, pharynx or tongue, associated with excessive salivary secretions, extremely foul breath, headache, general malaise, swollen glands or perhaps a diffuse cellulitis, and usually painful swallowing.

SEVERE CASES: Unfortunately, the severe cases are almost always due to trauma incident to ill-advised treatment, namely, extraction of teeth, or incision into diseased tissue. More discussion of this will follow in this paper.

DIAGNOSIS: A careful history and a careful examination will always excite suspicion. The gums are intensely red and spongy. There may be a greenish-yellow pseudo-membrane which is easily detached from the surrounding tissue, and leaves a bleeding surface. The odor is characteristic, and usually very unpleasant. Ulcerations may be found on tonsils or elsewhere in the oral cavity. These are punched-out in appearance, ragged, and surrounded by an extremely red zone. They are very painful to touch. The diagnosis is clinched by finding Fusiform Bacilli and Spirilla in stained smears. The membrane, if one is present, should be rubbed off and a smear made from the bleeding surface for examination. Rub surface hard with sterile cotton-tipped applicator, and then apologize to the patient for being rough. Sterling's Gentian Violet on fixed smear for 30 seconds will give a beautiful picture if organisms are present. I have been informed by two research workers heretofore mentioned, that in lesions of the lungs, that this stain will not show the Spirilla, but I have personally demonstrated them in pus from a lung abscess and sputum from a bronchiectatic cavity.

PREVENTION AND TREATMENT: In considering the foregoing statements, it is quite evident that the question of oral hygiene is the sine qua non in prevention. Practically all workers are agreed that the teeth and gums are the first portals of entry of the causative factor. We see reports of so-called epidemics of Vincent's infection, but in the strict sense of the word, does it really appear in epidemic form, or are there other factors that contribute to its appearance? It is transmissible, of course, and all known methods of preventing the spread of disease should be practiced. Patients should be warned to avoid kissing, or in other ways, subjecting uninfected friends and relatives to the disease. We have stated that it is particularly prone to occur in debilitated people—those who have diabetes, tuberculosis, cancer, syphilis, etc. Is not excessive exposure or a diet deficiency sometimes an etiological accessory? We know that scurvy, pellagra, and beriberi are greatly influenced by diet. This disease may be another instance. This might easily explain the increased incidence during the War. Crowded conditions in the cities, and exodus from the farms, increasing the consumption of canned goods, and decreasing the consumption of fruits and fresh vegetables, may explain in some degree its increasing incidence. This explanation of lowered vitality, and the overcrowding, particularly in moving picture shows, closed automobiles, etc., certainly aids materially in opportunities for exposure to this and various other infections. To the dental and medical professions, lies a serious responsibility. We all see entirely too many victims of oral surgery without adequate and safe preparation. The profession of dentistry and that of medicine should have a closer bond of cooperation, and more frequent consultations would redound to the general public's good.

Just what the explanation is of an apparently healthy person, who, 3 or 4 days after the extraction of several teeth, suddenly becomes seriously ill with chills, fever, rapid pulse, and other evidences of a severe toxemia, no one for certain knows. We have found Spirilla and Fusiform Bacilli in many of these cases. The oral cavity frequently harbors cocci, diplococci and bacilli, and as some of these are usually associated with the explosive severity of the disease is due to the toxemia of all the organisms in a symbiotic combination, or the Vincent's organisms or the cocci. Blood cultures in our experience have been negative. Anaerobic cultures should be made. This question is more or less academic, because we do know that this entity may be obviated by a careful preliminary treatment, and by extracting only 1, 2 or 3 teeth at a time. Patients, particularly if somewhat run-down, should have a careful physical examination before any extensive oral surgery is at-

tempted. If the hemoglobin is low, efforts should be made to build it up, thereby increasing his resistance, before anything radical is done. If extractions are necessary, they should be postponed, particularly if Vincent's organisms are present, until this infection can be cleared up. Would it not be a forward step if more dentists would add to their office equipment, a microscope and a few stains, and be prepared to know whether or not their patients for extraction were free of Vincent's organisms? These organisms, when present, are found deeply embedded in the tissues. When they are present, the trauma of extraction presents an ideal environment for these organisms or their symbiotic cocci cousins to get in their deadly work.

TREATMENT: In a survey of many articles concerning the treatment of Vincent's infection, the writer has been impressed with the many therapeutic measures employed. It is his observation also that when such a situation is found, most of the remedies are inefficient. In the treatment of these infections, certain fundamentals must be remembered. We are dealing with anaerobic germs. Supply oxygen to them, and they cannot exist. Sodium perborate, Hydrogen Peroxide, or Potassium permanganate, all releasing a generous supply of free oxygen, are excellent. This treatment should be instituted by the dentist so that all pockets are penetrated. To give a patient a prescription of any of the above named remedies, is almost sure to court failure, and bring reproach to your practice. In this disease, and many others inclined to chronicity, I think the danger of overtreating is great. Irritating applications frequently injure the tissues and prepare the way for deeper invasion of the infection. Most of the drugs advocated are of this kind. There is a strong tendency for the vast majority of infections to get well naturally and without treatment. Frequently, we pat ourselves on the back and think we have found a specific, when as a matter of fact, the condition clears in spite of our treatment. And, again we by overtreating, encourage chronicity. I know of one case of Vincent's infection that lasted 9 years. Every form of treatment was used. In all spirochetal infections, arsenic is practically a specific. Arsphenamine, Neo-arsphenamine, and Sulpharsphenamine are indicated intravenously only when constitutional symptoms are present. The use of intravenous therapy, particularly arsenic, is not entirely without danger, and before its use, certainly we should know about the condition of the vital organs. Topical applications of 2 to 10% solutions of the arsenicals in glycerine is advocated, and evidently has some virtue. Some men use applications in full strength. One patient told me that he was never able to control a chronic infection of Vincent's until he stopped drinking. The question of diet, I think is very important. An abundance of fresh fruit, tomato juice, particularly oranges, grape fruit and lemons, should also be taken. The average case will respond to this form of treatment promptly and satisfactorily. It is customary with many practitioners, to resort to arsenic preparations intravenously. This is not good therapy, except in those cases that fail to respond to local measures. The following cases will illustrate moderately severe and severe cases:

1. E. B. B. Male. Age 34. Entered Columbia Hospital complaining of excessive salivation, dysphagia, and inability to close mouth on account of swollen tongue. Cervical glands enlarged. Pulse 110, temperature 103, severe headache. Unable to see in throat on account of swelling. Slight patches on tongue. A smear from end of tongue showed many Fusiform Bacilli and Spirilla. One dose of Neosalvarsan 6. gm. intravenously and a mouth wash of a saturated solution, Sodium Perborate, cured the patient in less than one week's time.

2. S. R. Female. College student, age 21, consulted me in 1926 complaining of cough, tired feeling, daily temperature, loss of weight, etc. Physical examination of chest revealed no physical signs, except a slightly prolonged expiration, some increase in whispered and tactile fremitus. An X-ray of the chest showed a slight cloudiness at both apices, which the roentgenologist interpreted as incipient tuberculosis. Repeated sputum examinations failed to show any tubercle bacilli, but constantly showed Fusiform Bacilli and Spirilla. These organisms were also found in smears from the gums. A diagnosis of Pulmonary

Spirochetosis was made. The patient was advised to remain in bed until the temperature and pulse became normal. Neo-asphenamine .3 gm. was given intravenously and Sodium Perborate (saturated solution) as mouth wash and gargle. The Neo-arsphenamine was repeated in 3 days. Two days after this, patient's temperature rose to 103, and she developed a typical arsenical dermatitis, which promptly responded to specific treatment. Patient remained in bed one month, gained 15 lbs., and has been entirely well since that time. This is not the history of Pulmonary Tuberculosis which fails to respond to treatment as quickly.

Case 3. C. S. Female, age 31. Entered the Baptist Hospital March 17, 1927, with history of having a sore mouth for 5 or 6 weeks. A dentist pronounced this a case of pyorrhoea. About 2 weeks later, patient had fever, ached all over body and thought it was "flu." Finally a tooth was extracted and in 3 days, she became seriously ill, at which time, she entered the hospital. Patient was well nourished, but extremely pale, and somewhat edematous, especially about the face. Physical examination negative except for this swelling and a few petechial spots on the body, and intensely inflamed gums and mouth. There were ulcerations on the tonsils, and the gum margin where the tooth was extracted was gangrenous in appearance. Breath was extremely foul. Temperature was 103, pulse 130. Hemoglobin 20%. White cells 11,000, and a subsequent examination showed 30,000. A smear from the mouth showed a great many Fusiform Bacilli and Spirilla and cocci. A blood culture was negative; also, blood Wassermann and Kahn tests. The urine showed considerable albumin and many casts. A mouth wash of a saturated solution of Sodium Perborate was used locally, and .3 gm. of Neo-arsphenamine was given intravenously. The referring physican was advised that this was questionable therapy on account of the albuminuria and the patient's general physical condition; but owing to the gravity of the case, it seemed justifiable. Patient was also given a transfusion of 500 cc's of blood, but continued to become worse, and had a complete suppression of urine. She died March 22, 1927.

The above patient emphasizes two important things; one, the danger in employing intravenous arsenical preparations in patients who have kidney involvement, and a failure on the part of the physician and dentist in the case to make a correct diagnosis. Too often do physicians send patients to dentists for extraction without any knowledge of their general physical condition, and similarly, too often do dentists extract teeth when these patients are referred.

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*FUSO SPIROCHAETAL DISEASE OF THE LUNGS

By E. W. Carpenter, M. D., Greenville, S. C.

(1)—"Evidence is accumulating from clinical, bacteriological, pathological and experimental studies to indicate that a number of pulmonary conditions previously regarded as distinct diseases are in reality different manifestations of one type of infection. This group includes: (1) pulmonary gangrene, (2) pulmonary abscess (spontaneous and post operative) (3) certain types of unresolved pneumonia, (4) bloody bronchitis, (5) putrid bronchitis and (6) primary bronchiectasis."

"Their common origin is suggested by frequent occurrence of two or more of these conditions in the same patient, thus abscess may exist in one part of the lung and gangrene in another, or a patient with abscess may develop bronchiectasis, and certain types of unresolved pneumonia may terminate in abscess or bronchiectasis."

For several years we have been interested in Spirochetal lesions of the mouth. Our study of these lesions led us to speculate as to the further entrance of these organisms into the respiratory tract and we began to recall patients who had presented obscure chest lesions, which in most instances had been diagnosed tubercular by a process of exclusion, the organisms had never been demonstrated. We recalled some of these patients for further study and kept an eye open for others.

It is an axiom in medicine, that we generally find what we are looking for, so it was not long before we had accumulated a satisfactory

*Read before the South Carolina Medical Association, April 18, 1928.

number of these cases to prove to us that pulmonary spirochetosis is quite common in this State.

We know that the organism is very difficult to eradicate from the mouth once it gains an entrance and its choice of location is in the gums around the teeth and in the tonsils, from these locations it sorties forth and begins to dig in at other areas whenever the environment is good for such activity. The spirochetes presence in the mouth and tonsils contaminate expectorated excretions and thus renders a positive finding of the organism in the sputum of doubtful value. Because of this we decided that uncontaminated specimens must be procured from the bronchi. Bronchoscopy is not an office proceedure and many patients who were in fair health except for a chronic cough would not submit to a hospital study. We solved our problem by using direct laryngoscopy with the patient sitting astride a straight chair with both arms around the back of the chair, the fauces and larynx can be moderately anesthetized, long steril cotton tipped applicators can be readily passed into both bronchi and the fresh specimens studied with special stains.

For many years the English have recognized a form of pulmonary tuberculosis without bacilli in the sputum. In recent years we have seen cases diagnosed as tuberculosis by outstanding clinicans where no bacilli could be demonstrated in the presence of generous expectoration. One of our first cases was referred by a prominent practitioner of this State for study of a suspected esophageal varix, a young woman of twenty who had during three years experienced numerious and copious bleedspells. Her case proved without doubt to be a pulmonary spirochetosis. We submit the following cases as being illustrative:

1. March 25, 1927, Miss L. F., age 20, weight 110. Referred for possible varix of esophagus. Family history negative. Personal history unimportant until three and one half years ago when recurrent bleeding from the lungs appeared, the blood would well up in the throat and had to be expectorated, this would continue with lessening intensity for several days. Frequently had half to one and one-half degrees of temperature. Studied by two outstanding chest specialists whose conclusion were that patient did not have tuberculosis. X-ray of chest reported negative. After obtaining the above history, which has been abridged, we decided to study the case for spirochetal infection of the lungs. Both lungs revealed pathology at bases, cough has never been a prominent symptom. Direct smears obtained from the trachea and bronchi.

1. Laboratory report on smears.

Gentian Violet and Fontana stains-Numerous Vincents Spirochetes and Fusiform bacilli. Numerous Pneumococci, few streptococci. Gebbetts stain—Negative for Tubercle bacilli.

2. Smears from the Trachea and Bronchi.

Gentian Violet and Fontana stains—Vincents spirochetes and numerous fusiform bacilli. Numerous pneumocci, few streptococci. Gebbetts stain—Negative for Tuberculi bacilli.

X-ray report: Dense inflamatory infiltration at base of both lungs which suggests post flu result. Mediastinitis marked on both sides. Upper right lobe in second interspace shows a very slight tuberculous infiltration which does not suggest activity. Thickened interlobular on right side. September 1, 1927 —Weight 120, no further free bleeding but an occasional small streak of bright blood in sputum.

3. Laboratory report—Fontana stain—Rare Vincents Spirochetes and few Fusiform Bacilli. Gentian Violet—Rare Vincents Spirochetes and few Fusiform Bacilli. Grams stain—Pneumococci and some miscellaneous bacilli. Gabbetts stain—Negative for Tubercule bacilli. This patient is greatly improved and continues under active treatment.

Case 2. Mr. H. L. D., age 22. Two years ago had hemorrhage from the lungs about a teacupful. Previous to this time had no cough, had not lost weight and was working every day and feeling well. Took rest cure of six months and gained only seven pounds. Free from symptoms until two weeks ago when coughed up 2-3 mouthfulls of blood and bright bloody stained sputum for several days after. Had several sputum examinations and no tuberculi bacilli ever found. Has pathology in lungs at bases. Laboratory report of slides

made from direct smears from the trachea and bronchus.

1. Occasional fusiform bacilli seen. Approximately ½ dozen Vincents found on examination of six slides.

Fontana stain—Fairly numerous spirochetes. Gentian Violet few fusiform bacilli. No spirochetes seen (The spirochetes found with Fontana stain were too delicate to be found with Gentian Violet).

Case 3. Mr. L. H., age 28 years. Seven years ago had severe bronchitis followed by pulmonary hemorrhage. Was diagnosed tuberculosis and for many months was an invalid and treated in a sanatorium, repeated examination of sputum but no bacilli were ever demonstrated. X-ray and physical findings justified a diagnosis of pulmonary tuberculosis with abscess in right middle lobe. Laboratory report of direct smears from Trachea and right bronchi.

1. Vincents spirochete and few fusiform bacilli, few pneumococci. No tuberculi bacilli found.

This man has had several doses of Neo-Arephenamin and Sulph Arsphenamin, he gained in weight, works every day, cough has completely disappeared and he says he feels perfectly well.

Lung mapping with diluted lipiodol is very helpful in locating the lesion and revealing its nature. Laboratory study of sputum is suggestive and in cases of profuse expectoration it may be conclusive, but there are cases where expectoration is almost nil and others where bleeding is quite frequent, these cases must not be diagnosed by the presence of an occasional spiro and fusiform bacillus found in an expectorated specimen. Uncontaminated specimens should be procured from the trachea and bronchi.

Lung mapping with recent technique is a very easy and unoffending proceedure. (3) Solutions can be directed into either lung with certainty and by gravity it can be guided to parts of the lung distant from the bases. Pneumography is not yet standardized and while there are mooted points in interpretation it is of great assistance. Rarely will the opaque substance show a cavity because most cavities empty by narrow and devious small channels which the opaque substance can not enter. The cavity is therefore not invaded and in the plate shows clear, thus a negative finding may lead to a positive diagnosis. In cases of copious excretion this material should be removed from the lungs before using the radio opaque substance. We have found that an eighty per cent dilution of lipiodol gives a perfectly clear shadow. "The term abscess has been rather loosely applied to the condition of drowned lung in which pus has accumulated in the natural passages." This accumulation is due to the more or less complete destruction of bronchial mucosa and a stasis ensues, this static area is emptied only by gravity or when the diseased area over flows and stimulates the normal cillia, thus provoking a cough reflex. With the ease now that we can pour fluids through the larynx and trachea and direct it to either lung I believe that this will establish a method of irrigation which will prove satisfactory and as efficient as placing it through a bronchoscope. With scarcely any discomfort to a patient the affected lung can be filled with bland solutions like normal salt followed by postural drainage until the diseased area had been cleaned, then medicinal solutions may be used and retained for long or shorter periods. If a solution of Novocain 1% be used to lavage with, the medicinal solutions can be retained without coughing for relatively long periods. While we have not had a suitable case we believe that solutions of per borate of soda will prove efficatious in cases of bloody bronchitis.

Conclusions

1. Obscure and doubtful cases of pulmonary tuberculosis should be studied with the view of exclusion of fuso spirillary infection.

2. Demonstration of great numbers of spirilla and rod shaped bacilli in copious sputum is highly suggestive of pulmonary lesions.

3. Positive evidence of lung infection with these organisms should be made from direct smears or aspirations from the trachea and bronchi.

4. The various arsenic preparations are of great benefit.

5. Many of these cases are present in South Carolina.

Bibliography

1—(David T. Smith Reprinted from the American Reviews of Tuberculosis Vol. XVI, No 5, November 1927.)
2—(Chevalier Jackson.)
3—Am. Jr. Med. Sciences. February, 1928—Oschner.
4—Lung mapping illustrated with slides.

DISCUSSION

Dr. George R. Wilkinson, Greenville: I am sorry there are not more people here to hear this paper. This disease is one that has been known for some time, but it is only recently that we have paid much attention to it. I should like to call your attention to one or two things, particularly. We have in this country a young man named David T. Smith, living in New York City, who has written very voluminously on this subject. If you see any of his articles on it you will find them well worth reading. He is now preparing a monograph on this disease, which will be out next year. The subject is almost as broad as tuberculosis.

I should like to mention one thing about the pathology. The organism is present frequently when we have not the disease; that is, we may have the fusiform bacillus in our mouths and not be bothered with it at all. In that particular it is a contrast to tuberculosis, for when we have the tubercle bacillus in the sputum we regard that as a positive diagnosis. Very often we may have the fusiform bacillus and spirillus without any evidence of disease.

The disease is often confused with tuberculosis. There is one rule-of-thumb which I might mention. When a person whom you regard as having tuberculosis has constant or frequent small hemorrhages, the chances are that it is not just pulmonary tuberculosis—because this disease frequently complicates pulmonary tuberculosis. In such cases, if you are not able to get a specimen with the bronchoscope, you can give these people some arsenicals; and if they clear up very rapidly from the hemoptysis you have that evidence that the disease is not of tuberculous origin but is of spirochetal origin.

About the pathology, this organism is of a destructible, invading character. All of you have seen Vincent's angina in the mouth. It invades and destroys the tissues. When it invades the bronchi it cuts into them. These _____ show how it cuts into them, leaving punched-out areas, so to speak, somewhat like the punched-out ulcer of syphilis. If you see a punched-out ulcer of the skin you immediately think of syphilis, and this spirillum belongs in the same group to which the Treponema belongs.

As a practical prophylactic for this disease I should like to mention one thing. If you have a patient with tuberculosis or any chronic pulmonary infection, watch how the patient breathes. So many of these patients are thoracic breathers; they try to breathe by expanding the cylinder rather than by moving the piston up and down. They should be taught to breathe with the diaphram, because then they can clear out these secretions much better than if they breathe with the chest.

Dr. Henry F. Hoover, Columbia: I listened to this paper with great interest, and it has brought to my mind many cases that have been very vague up to just a few minutes ago.

With regard to the spreading of this infection from the mouth and throat, where it first takes its seat of origin and by continuity of tissue goes into the lungs, I wish to call the minds of the men here to the fact that the same infection can go into the esophagus and on into the stomach; and then you have very similar symptoms to those of ulcers of the stomach. I have had three cases recently in my practice; one, particularly, had been diagnosed by one of our best diagnosticians as ulcers of the stomach. Upon getting this patient as a throat case I immediately had his bacteriology worked out, found a violent case of Vincent's angina, and immediately put him on treatment with the arsenicals. I gave him seven doses of neo-arsphenamin, ranging from .45 up to .9. At the expiration of this treatment the man, in less than six weeks, put on fifteen pounds in weight. He could not eat anything at all when he came to me; when he was dismissed he could eat anything he chose to eat. The improvement was simply wonderful. I have seen these cases referred to by Dr. Carpenter, with every symptom of laryngitis coming on; and my treatment for those cases was to take my spray machine and, under force, spray their throats with two per cent. nitrate of silver, making them hold their breath. Even then, some of them would strangle until you would think they would lose their breath, but it acted almost as specific for that form of infection in the acute stages. I put them immediately on arsphenamin, and the improvement was wonderful. Of course, when it is complicated, and when it gets into the lungs, with changes in the bronchial tubes, the condition is different. The disease is at a stage where it has gone beyond remedy. Of course this treatment is limited, as outlined, to the infection in the acute stage and when confined to the pharynx, larynx, etc., and has not reached the lungs. After it has reached the lungs the entire picture is changed; it passes into the condition so ably explained in Dr. Carpenter's paper.

Dr. Carpenter, closing the discussion: In the United States there have been only 151 cases of this infection of the lung established and identified. I believe there are many cases in South Carolina.

I thank the gentlemen for the discussion.

*ARSENICALS AND THE OPTIC NERVE

By J. W. Jervey, M. D., Greenville, S. C.

My object in bringing this subject before you is to emphasize the importance of routine care of the function of eyesight during the modern arsenical treatment of syphilis.

It may be safely said that arsenical therapy is today practically universal. Almost every practitioner of experience is using it, due largely to its evident advantages, to the simplification of technique, and to the wide distribution of the required materials in convenient and acceptable form.

In the earlier days of the use of arsenicals for this purpose, say prior to 1920, many results disastrous to vision were reported, attributed to the effects of the drug. About this time H. V. Wurdemann (American Journal of Ophthalmology, January, 1920), one of our ablest ocular pathologists, asserted his conviction that the lesions manifested in the optic nerve were not the direct effect of the drug, but an intensified luetic activity stimulated by the exhibition of arsenic.

A little later, the so-called Herxheimer reaction came to be generally accepted by syphilologists, and this is the phenomenon, not infrequently observed, of the acute activation of the specific infection following arsenical medication, and controlled apparently, and brought into subjection, by even more intensive treatment.

However, there remains the fact, in spite of the lack of positive clinical and experimental evidence, that many competent observers are convinced that the exhibition of arsenic is not without danger to the optic nerve. That some arsenicals are less dangerous than others is also undoubtedly true.

As J. G. Hopkins, of the Department of Dermatology, Columbia University, points out (Arch Ophth. November, 1927), all of the pentavalent arsenic compounds used in the treatment of syphilis have produced optic neuritis, and all have been discarded except tryparsamide. This form seems useful in neurosyphilis, but is used with the greatest caution regarding its effect on the optic nerve. The trivalent arsenical compounds, to which class the arsphenamins belong, seem less injurious, and positive damage to the healthy optic nerve has not been proved, but Hopkins adds significantly, in eyes with a pre-existing neuritis or primary optic atrophy arsphenamin has not infrequently appeared to cause damage.

That there is some obscure effect of arsenic on the optic nerve is at least strongly suggested by Suker's report (Amer. J. Oph. Vols. 3 and 5, 1920 and 1922) of four cases of methyl alcohol blindness (known to be an optic nerve lesion) treated with arsphenamin with good results. Moulton (Trans. Sec. on Ophth. A. M. A. 1923) reports a similar case treated with small doses (.3 and .6 gram) of neo-arsphenamin with gratifying results; and Stock (Klin. Monatsblatt F. Augenheilkunde, July-Aug., 1923) reports thirteen cases of retrobulbar optic neuritis from various causes, including alcohol intoxication, multiple sclerosis and sinus infection, in which ten of the cases were treated with small doses of salvarsan with good effect.

In the face of these reports, and of course there are many others, must we not believe that there is some definite, or perhaps we might better say indefinite, connection between the use of arsenicals and lesions of the optic nerve?

Unfortunately, we are confronted on the one hand with the undoubted fact that syphilis often involves the optic nerve, and on the other hand with the insistent belief that arsenic may also cause second nerve pathology. In the course, then, of the administration of arsenic in the treatment of syphilis how are we to determine the occurrence of optic nerve involvement as *post hoc* or *propter hoc* in either category? There is the rub.

Let me advert briefly to three cases, each typifying a class in my experience:

FIRST: A distinguished citizen of our state, aged about 60 years, manifested a central nervous disturbance. The trouble was traced to

*Read by invitation at the Annual Meeting of the Malboro County Medical Society Bennettsville, S. C., January, 10, 1929.

an old luetic infection forty years previous. Tryparsamide is the therapy of choice apparently in such cases. As a consultant I watched his eyegrounds and visual fields. Suddenly, after the sixth or seventh intravenous injection of the drug, a large segment of the temporal field of vision of the left eye was lost. The arsenical was stopped. The visual field was regained in two or three weeks.

SECOND: A young white man, in his early thirties, under treatment for syphilis in a neighboring city, suddenly developed a serious impairment of vision after his seventh intravenous injection of neoarsphenamin. A bilateral optic neuritis, with retinal hemorrhages, was found. Arsenicals were stopped. Mercury intramuscularly and sodium thiosulphate intravenously were exhibited, and immediate improvement began and has continued for four months, so far.

THIRD: A prominent Floridian sojourner, under the care of one of our most astute urologists, was being treated for a malignancy of the bladder (subsequently operated on and cured). A tentative diagnosis of retrobulbar neuritis was made and a small provocative injection of neoarsphenamin was suggested. Previous negative Wassermanns were promptly turned into a plus. Vigorous arsenical treatment was instituted and normal vision was recovered.

It will be remarked that in the first and second of these types the arsenicals were promptly withdrawn; while in the third case they were pushed, with equally gratifying results; Why?

In the first instance it was assumed that if the luetic infection originating forty years previously had not attacked the optic nerve in all that time, it would be a strange coincidence for it to do so just at this time when another cause, of suspected potency, was being exhibited. So the arsenic was stopped, and the event proved happy.

In the second type of case the systemic condition had greatly improved after seven weekly injections of neoarsphenamin, and it was hard to believe that with the general infection well under control a sudden local flare-up should occur from this source; or that it should take, in other words, as many as seven arsenical injections to produce a Herxheimer reaction. It seemed more rational to hold the arsenic guilty. At any rate the event proved gratifying.

In the third type of case we have an old latent syphilis manifesting itself in an attack on the optic nerves. A provocative dose of neoarsphenamin promptly uncovered a positive Wassermann and as promptly blew up both nerves with an acute neuritis. Obviously, the original source of the lesion was syphilitic and not arsenical. The latter medication was pushed vigorously and recovery resulted.

It is interesting to note what Ch. Abadie has to say in this connection (Bull. Soc. Franc. de Dermat. et Syphil. April, 1928): He observes that since arsenicals came into use we now see chorioretinitis, ocular nerve atrophy, and so on, much oftener. These conditions establish themselves gradually, without pain or appreciable reaction. He believes that the arsenicals are not only wholly impotent to prevent their occurrence, but actually precipitate them and hasten the coming of blindness. He thinks the changed form of spirochete has a special affinity for nervous tissue and finds a congenial soil in the optic nerve. He is convinced that tabetic optic atrophy is a manifestation of nutritional deficiency and that the use of arsphenamin in such cases is absolutely contraindicated, whereas the proper administration of mercury either intravenously or subcutaneously will avert the onset of blindness for long periods of time.

E. L. Zimmerman, syphilologist to the Baltimore Eye, Ear and Throat Hospital and the Presbyterian Eye, Ear and Throat Hospital (Arch. Ophth. November, 1925) lends the weight of his opinion to this observation, remarking that in tabetic optic atrophy with marked contraction of the visual field arsphenamin therapy had best be abandoned, because, he avers, the chance of improving vision is *nil*, and the danger of hastening the inevitable amaurosis is considerable. Zimmerman, however, appears to be a firm believer that neuro-occurrences and neuro-recurrences are to be ascribed to the infection and not to arsenical medication, and that while mercury is indicated in these cases, it is immaterial whether it is administered together with arsphenamin

or after the arsenical course has been completed.

It seems reasonable to the writer that from the viewpoint of ophthalmology, at least, the therapeutic use of arsenicals should be encompassed with meticulous care and caution. Unfortunately, as has been previously noted, the onset of optic nerve lesions is frequently insidious. Pain or failing vision may not be complained of by the patient. How is so serious a complication to be avoided, and if not avoided how is it to be combatted when once discovered?

Zimmerman (Arch. Ophth. Sept., 1928) aptly says: "The prophylaxis of such disastrous reactions is obvious. In all optic neuritides antisyphilitic treatment should be instituted with caution. Either a preliminary course of mercury or bismuth should be administered, or if arsphenamin is employed from the very outset the initial dose should be small." He truly remarks that optic neuritis may cause no subjective symptoms and only be detected on routine examination of the fundus—and, he might well have added, of the visual fields.

J. A. Fordyce (Amer. J. M. Sc. March, 1921) says that routine spinal fluid examination in the early stages would do much to prevent the occurrence of neurosyphilis. Neglect of systematic eye-ground examination in the active stages of the disease will likewise cause many cases of beginning optic neuritis to be overlooked. It is strongly probable, he thinks, that the treponema invades the nervous system during the period of general dissemination, or not at all. Along with other well-known observers he feels that where the neuro-manifestations are clearly of syphilitic origin the pushing of arsenical therapy by intraspinal methods offers the best hope of help.

With these thoughts in mind, the writer can only suggest and urge that in the modern treatment of syphilis in every case a careful preliminary and then concurrent examinations of the eyegrounds and visual fields should be insisted on, for only by these means can many of the otherwise inevitably numerous instances of the major disaster of blindness be averted.

Summary

1. It is a fact that syphilis often involves the optic nerve, and that in the modern treatment of syphilis the arsenicals are almost always resorted to.

2. There is a deep, if at present indeterminate, professional impression that the exhibition of arsenicals at times seriously involves the optic nerve.

3. Careful reasoning must be invoked to determine whether optic nerve lesions are to be regarded as of luetic or arsenical origin, and therapeutic procedures must be governed thereby.

4. To safeguard the patient, therefore, in the inestimably valuable faculty of vision it is desirable to maintain close and constant observation of the eye-grounds and visual fields during the courses of arsenical treatments, whether for the determination of pushing or interrupting such therapy.

EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M. D., F. A. C. S., CHARLESTON, S. C.

THEORIES OF ACCOMMODATION DR. M. U. TRONCOSE, N. Y. CITY, AMERICAN JOURNAL OF OPTHALMOLOGY

In the following article there is something of value to the operative for cataract and glaucoma, besides being also value to the oculist who wants to understand his subject. Many of the cataract operators speak of rocking the lens free during the act of opening the anterior capsule or removing pice of it.

The old controversy is still open between the two principal theories of accommodation namely, that of Holmholtz as to relaxation of the zonule and lens capsule during accommodation and that of Tscherning and others, which considers tightening of the zonular fibers and compression of the lens as the principal factors in accommodation.

To direct and indirect illumination the fibers of the suspensory ligament of the lens appear as straight, brilliant, golden filaments arranged in groups, each of which corresponds to the head of a ciliary process and merges abruptly by a line (not a point) of insertion with the lens capsule at different levels.

In the May issue of the American Journal of Opthalmology, page 383-4, Dr. Albert L. Brown says, "By oblique illumination the anterior surface of the lens could be seen moving steadily forward during accommodation and by more direct examination the outline of the equator of the lens was seen to become more smooth than it was when the eye was fixed for distant vision.

By far the main observations made on this patient were those noted at the insertion of the fibers of the anterior capsule. When the patient was accommodating as fully as possible, the insertion of the fibers merged imperceptibly into the capsule. A s there was directed to look into the distance the fibers were seen to shimmer in a half light, and fine crenations appeared at the insertions of the fibers, causing an appearance roughly analogous to formation of fine crenations on the back of the hand when a bundle of fine hairs are pulled up.

The actions of mydriatics and miotics were of especial interest in this case. The patient was directed to gaze into the distance, and 0.75 per cent eserin was dropped into the left eye. In six minutes the fibers were seen to shimmer and the crenations became smoothed. The anterior surface of the lens moved forward as did the shadows cast by the anterior ciliary processes, and the waves in the edge of the lens became smoother. A two per cent solution of atropin was then instilled.

A view of the zonule fifteen minutes after three drops, each at two minute intervals, showed tiny crenations appearing at the insertion of the fibers. The reaction under eserin and atropin then, were exaggerations of the effects produced by distant and near vision."

The physiological problems to be investigated by means of the biomicroscope are twofold:

1. As to the change in the shape of the lens during accommodation.

2. As to the condition of the zonular fibers while this process takes place.

Accommodation causes increase in the curve of the anterior surface of the lens.

Fincham found that the anterior surface assumed a hyperbolic curve in accommodation, the apex rounding into a spherical curve in the pupillary area. In a case of aniridia Story found diminution of the equatorial diameter, especially under eserin.

It seems, therefore, that in the act of accommodation that the lens increases in thickness and decreases in diameter, the anterior surface bulging forward and taking a hyperbolic curvature at the same time that it advances into the anterior chamber, an observation of importance in the causation of glaucoma. The blocking of the angle of Schlemin's canal being heretofore chiefly ascribed to the bunching up of the iris and ciliary body. Dr. Trencosa

believes that there is a shifting of the lens fibers.

In accepting the relaxation theory of accommodation it is not necessary to concede the property of elasticity of the lens. Gullstrant, defining change in shape of the lens in terms of shifting cortex, probably has enunciated the most workable hypherthesis. May not the lens, with the capsules relaxed, increase in its anterioposterior axis, not by springforward, like a coiled spring released from tension, but by a passive shifting of the cortex induced by pressure of the vitreous near the periphery of the posterior aspect of the lens?

Apparently, from the results of Graves' investigation of his case, the capsules are pulled during distant vision and relaxed during accommodation. This fact was confirmed in 1925 by Basil Graves, who presented to the American Opthalmological Society a paper describing a case in which he was able to observe tension upon the lens capsule during distant vision and relaxation of the capsule during accommodation. It was further confirmed by A. L. Brown, whose observations have already been quoted.

It is a proved fact that the lens is plastic enough to change its own shape during contraction of the ciliary body, this is the "physical" accommodation of Fuchs. The hard nucleus, being unyielding, it is the cortex which shifts from the equator to the center and to the anterior surfaces of the lens. The lens fibers are kept compressed by the taut capsule during distant vision.

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Since my last report in May, collections have been too few to encourage a monthly publication. Having come now to "Grand totals" I have an array of figures sure of a welcome.

In January, having reached our goal, the Committee decided to consider the campaign closed, and to collect the appropriation from the State. The above statement shows the result. It also shows one contribution received since—which we gladly accepted as we will any additional gifts. For, of course, as is the case in all building, we find our expenses showing a distinct inclination to outdistance our expectations.

We have already made certain payments to Sculptor and Contractor in accordance with signed agreements. When all bills have been paid, an itemized account of the whole will be published for the information of all interested.

Submitted with congratulations to the Woman's Auxiliary.

Treas. Sims' Mem. Fund.
Mrs. Wm A. Boyd,

TO THE COUNTY AUXILIARIES

You have all received notices regarding the annual dues together with a request for a list of members and their addresses. The American and Southern Auxiliary have requested the complete list; so far as they are concerned there are no members except paidup members—our list must correspond with the dues we send.

Since the State meeting in Charleston has been put off until May, I think we may allow our selves a month's grace in which to pay up. Please have all dues, with lists, in by March the first, and please give full address with every name to assure the receipt of literature which it is desired to send to each Auxiliary member.

Mary K. Boyd,
Treas. Woman's Aux. to S. C. M. A.
(Mrs. Wm. A.)

SOCIETY REPORTS

REGULAR MONTHLY MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY, HELD AT THE IMPERIAL HOTEL, JANUARY 7, 1929.

The meeting was called to order at 8:15 P. M., by the president, Dr. J. G. Murray, with about 40 members present. A buffet supper was served by the Hotel Management before the scientific program.

Reports of clinical cases were then called for. Dr. Hugh Smith, reported a case of diaphramatic tic with complete relief of symptoms by phrenocotomy. This parallels a case reported by Dr. Smith, sometime ago with the same results. As there were no further cases Dr. Murray then called upon Dr. E. W. Carpenter who presented a very able paper on Pulmonary Abscess with Especial Reference to Tonsillectomy. Dr. Carpenter stated that this was most commonly met with during the winter. The aetiology of pulmonary abscess consists of thrombi, general anaesthesia, local anaesthesia and insufflation. Dr. Carpenter reported that he had never had a case in his practice as yet. It was also stated that pulmonary abscess can be caused by lung embolism resulting from abdominal operations although this has never been caused experimentally.

Placing patients in the Trendelenburg position causes less cases of this infection.

Diagnosis of pulmonary abscess depends on pain in the side, fever and leukocytosis a few hours later and begins as an obstructed bronchus. Much relief can be had through bronchoscopy.

The pathology was discussed by Dr. Hugh Smith, X-Ray by Dr. Wolfe and the surgery of lung abscess by Dr. C. O. Bates. Taking part in the general discussion were Drs. Mauldin, Kluttz, Pollitzer, C. B. Earle, Wilkinson; closed by Dr. Carpenter.

The President then called upon Dr. J. D. Guess, who dealt with the treatment of chronic infections of the cervix uteri in a very thorough manner.

Dr. Guess stated that this condition has been recognized and treated for a long time. After giving the anatomy of this structure, three types of endocervicities were mentioned (1) the "pseudo-erosion" which occurs in the newborn and very young girls (2) the gonorrhoeal and (3) the non-specific endocervicitides following normal labor. Of these types, the infantile endocervicitis comes from the vaginal flora. The gonorrhoeal type occurs in the form of an acute infection that does not last very long; the microorganisms live on the surface of the columnar epithelium and then invade the cervical glands, which tend to block the glands and bring about cyst formations. Secondary infections are prone to follow the gonococcal infection. Future gonorrhoeal infections are apt to follow if there is other exposure to an infected mate. The symptoms of chronic endocervicitis were then mentioned as being (1) Leukorrhoea (2) a yellow mucoid secretion (3) lacerations (4) backache (5) neurological symptoms, such as weakness, etc. (6) increased menstrual flow (7) intermenstrual spotting of the clothing (8) sterility, owing to the fact that there are mechanical and chemical agents which tend to destroy or injure the spermatozoa.

Prophylactic treatment—repair of lacerations early, if the patient can be admitted to a hospital, also proper postpartum care, and treatment after 6-8 weeks following delivery. Gonorrhoeal endocervicitis should be treated at the earliest possible time.

Curative treatment—Dr. Guess stated that there is a multiplicity of methods in the form of douches which are of no value; chemicals are popular but are of little or no avail; the most efficacious treatment is the actual cautery as this destroys the diseased glands and their ducts. Light cautery is more desirable than heavy cautery and an anaesthetic should be used. Stenosis or patency of the cervical canal may result following cautery and should be watched very carefully. Surgery should be no longer employed. Radium therapy has been used but unsuccessfully. Discussed by Drs. Hearin and Grimball; closed by Dr. Guess.

The applications for membership in the Society from Drs. J. E. Brunson and J. D. Parker were read. Dr. Carpenter moved that Dr. Brunson be elected to membership in the Society; seconded and carried. Dr. Hearin moved that Dr. Parker be elected to membership; seconded and carried.

The question of raising the membership dues to $10.00 a year was then brought up. After some discussion, it was suggested that this matter be laid over until the next meeting as laid down by the constitution.

There being no further business, the meeting adjourned.

I. S. Barksdale, M. D., Secretary.

A TRIBUTE TO THE LATE DR. J. F. KINNEY

Dr. John Frank Kinney was born in Brownsville, S. C., on July 31, 1870. He received his preliminary education at a private school at McColl, South Carolina, Wofford College, and graduated at the Medical College of South Carolina in 1893. He began the practice of medicine in Bennettsville, S. C. and gave thirty-three years of work to his chosen profession. In 1895 he was married to Miss Floy McLeod, a member of one of Marlboro County's most prominent families. He was regarded as an able physician, was county physician for twenty-eight years, was local surgeon for the A. C. L. Railroad, was president of the Pee Dee Medical Society the year before his death. He was also a member of the Marlboro County Medical Society, The South Carolina Medical Association, the Spartan Medical Association, the American Medical Association, and others. He was a member of the Exemption Board during the World War. He was Chairman of the Board of Trustees of the Murchison School for fifteen years. He was a devout church member and active in all church work. He was a high and representative Mason, and was loved and esteemed by all who knew him. He was buried at the McCall Cemetery in Bennettsville, S. C., on April 22, 1928.

WHEREAS: We, the members of the Marlboro County Medical Society desire to place on record our testimony of love and appreciation in which Dr. Kinney was held by us.

WHEREAS: We wish to testify also to his worth and standing in our community, therefore be it resolved:

First: That in his death we have lost one of our most devoted members. Our town and county one of its truest and most loyal citizens.

Second: That Dr. Kinney exemplified in his daily life all those principles that represent the best in our Medical Profession; always looking to the interest and welfare of his patients; never considering himself or his own comfort, when he was active and alert to everything looking to the advancement of the town and community; never shirking nor evading any duty or obligation devolving upon him; never putting off until tomorrow anything that could be done today; always putting forth his best efforts in anything he undertook.

Third: That a page in our minute book be inscribed to his memory; that a copy of these resolutions be sent to his family, the Pee Dee Advocate, and the South Carolina Medical Association.

Committee from Marlboro County Medical Society.

Charles R. May, M. D.
Douglas Jennings, M. D.

SPARTANBURG COUNTY MEDICAL SOCIETY MEETING

The regular monthly meeting of the Spartanburg County Medical Society was held Friday, Jan. 25, 1929, at the Spartanburg General Hospital, at 8 P. M. There were 22 members present.

The minutes of the last meeting were read and approved.

Dr. C. W. Bailey read a very instructive paper entitled, "A Pediatric Consideration of Acute Otitis Media In Infants". This paper was discussed by Dr. Cecil Rigby, Dr. R. P. Finney, and Dr. D. L. Smith.

Dr. F. H. Sanders gave a very able discussion of, "Digitalis Therapy". Dr. Sanders stated that digitalis slows and increases the volume of the pulse, that it is best prescribed in the original colored one-ounce bottles. In most chronic cases 22 minims per day is sufficient as it has been shown that this is the average amount excreted per day, but in acute cases of cardiac failure with or without auricular fibrillation, one minim may be given per pound of body weight. Nausea and vomiting indicate that too much has been given. Dr. Sanders stated that the major indications for digitalis administration were auricular fibrillation and cardiac failure from any cause, and the minor indications were toxic and degenerative myocarditis. Dr. Sanders decried the use of digitalis in cases of tachycardia, and in patients with heart murmurs where no symptoms were present. He said that digitalis was contraindicated in heart block and in toxic myocarditis due to diphtheria.

Dr. Sanders paper was discussed by Drs. Busch, Lindsay, and Finney.

Dr. Busch emphasized the folly of using digitalis in patients with heart murmurs without rest in bed, and asked Dr. Sanders what success he had had in using digitalis in pneumonia.

Dr. J. J. Lindsay said that he always used rest in cardiac cases and had found morphine very valuable in acute cases. He stated that he had not obtained good results from the use of digitalis in pneumonia.

Dr. R. F. Finney stated that digitalis acted as a diuretic because it increases the volume of blood flowing through the kidneys, but that the administration of too much digitalis caused a reduction in the urinary output because it produced a contraction of the arterioles. Dr. Finney said that he had used quinine in patients with auricular fibrillation without decompensation and had obtained good results, and that he always used digitalis in pneumonia, prescribing one-half teaspoonful every 4 hours until there was nausea or extrasystole.

In closing Dr. Sanders said that he found digitalis of very little benefit in pneumonia and only used it occasionally. He also stated that he had

found quinidine of much less value in auricular fibrillation without decompensation than digitalis, because of the unpleasant symptoms such as roaring in the ears which are produced when large doses of quinidine are given.

The amendment to the Constitution proposed at the last meeting to combine the offices of Secretary and Treasurer was voted on and passed. Dr. W. M. Sheridan was elected Treasurer as well as Secretary.

Dr. J. J. Lindsay moved that the Society take official notice of the death of Dr. Goldberger and that resolutions be sent to his family, to the S. C. Medical Journal, to the Journal of the American Medical Association, and to the Surgeon General of the Public Health Service. This motion was seconded by Dr. D. L. Smith. The President asked Dr. C. E. Thompson to see that the resolutions were written and sent to the proper parties.

Dr. E. A. Hines, Secretary of the State Medical Society, who was present as a guest of the Society stated that he had enjoyed the meeting, and invited all members of the Society to join the State Pediatric Society of which he was president.

Dr. Hines informed us that the meeting of the State Medical Association would be held May 7, 8, and 9 at Charleston.

Dr. Hines said that in 1926 the Spartanburg County Medical Society had 74 members, in 1927 65 members, and in 1928, 61 members, and that in 1928 there were 13 more doctors in the county than in 1927. He suggested that we have a campaign for members, and that the President of the State Society, the Councilor of the District, and himself would write letters to all non-members.

Dr. Hines also advised us to be on the look out for cases of undulant fever as there were cases in Columbia, Greenville, Georgetown, Conway, and Spartanburg.

There being no further business the Society adjourned.

S. O. Black, President.
W. M. Sheridan, Secretary.

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL, TUESDAY EVENING, JANUARY 22ND, 1929, AT 8:30 O'CLOCK.

The meeting was called to order by the President, Dr. Henry P. Jackson.

Present: Doctors B. R. Baker, Ball, Banov, Beach, Bowers, Buist, Burn, Byrnes, Cain, Cannon, Cathcart, Chamberlain, de Saussure, Jackson, F. B. Johnson, W. H. Johnson, Kollock, Lynch, McCrady, Maguire, Mitchell, O'Driscoll, F. L. Parker, Ravenel, R. B. Rhett, W. M. Rhett, W. P. Rhett, Richards, Rutledge, S. Simons, W. A. Smith, Speissegger, Taft, Townsend, Waring, I. R. Wilson, R. Wilson.

Guests: Dr. R. H. Lanning, U. S. N.; Dr. A. P. Morton, U. S. N.; Dr. J. P. Palmer, Dr. Roe E. Remington, and Dr. J. F. McClendon, of the University of Minnesota.

The minutes of the meeting of January 8th were read and confirmed.

Under Reports of Officers and Committees, Dr. R. S. Cathcart reported that the committee consisting of the President, Dr. H. P. Jackson, the Secretary, Dr. W. A. Smith, the Chairman of the Board of Commissioners of Roper Hospital, Dr. G. McF. Mood, and the Chairman of the Board of Finance, Dr. R. S. Cathcart, met a committee of ladies from the Charleston Exchange for Women's Work at the residence of Mrs. George S. Holmes, 16 Legare Street, on the afternoon of January 15th, 1929. According to the instructions of the Society, the President and Secretary executed in the name of the Society an Acceptance of the Deed of Trust and Dr. Jackson, President of the Society, received a check for one thousand, one hundred and twenty-two dollars and sixty-five cents ($1,122.65). This Deed of Trust was executed in duplicate, one copy being retained by the Charleston Exchange for Women's Work and the other by the Medical Society.

Dr. R. S. Cathcart, Chairman of the Board of Finance, reported as follows:

January 22, 1929.

To the President and Members of the
Medical Society of South Carolina.

Gentlemen:

The Board of Finance begs to report that they received from Dr. H. P. Jackson, President of the Society, a duplicate copy of a Deed of Trust and a check for One thousand, one hundred and twenty-two dollars and sixty-five cents ($1,122.65) from the Charleston Exchange for Women's Work.

The same will be invested and administered according to the terms of the Deed of Trust.

Very truly yours,
R. S. Cathcart, M. D., Chairman.

Dr. J. H. Cannon, Treasurer, reported that he had had a conference with Dr. Barnwell, according to instructions of the Society at its last meeting, and stated that Dr. Barnwell had not come to any decision as to what steps he would take in regard to his dues, and asked for more time, stating that he would let Dr. Cannon know soon. It was moved, seconded and carried that this report be received as information, and that Dr. Cannon report the decision of Dr. Barnwell at the next meeting.

Dr. W. C. O'Driscoll, Librarian, reported that the books which had been loaned to the Surgeon General's Library at Washington had been re-

turned and were now in possession of the Library Committee, being carefully stored away. He stated that he had had a meeting of the Library Committee and they were working on plans for the construction of a permanent place to store these books. It was moved, seconded and carried that this report be received as information.

The Secretary read a letter from Mrs. Ashley Halsey, Executive Secretary of the Charleston County Tuberculosis Association, inviting the members of this Society to attend the Annual Meeting of the Tuberculosis Association, which would be held on Monday, February 4th, at 8 P. M. She stated that Dr. P. P. McCain, Superintendent of North Carolina State Sanatorium, would make the annual address on Tuberculosis in Children.

The Secretary read a letter from Dr. William Weston expressing his appreciation of the resolution recently passed by this Society, in which he was praised for the splendid work he is doing as Chairman of the Committee for the Study of the Food Products of South Carolina.

The Secretary stated that Dr. Dougal Bissell, of New York City, who made the Sims Memorial Address on Gynecology at a meeting of this Society last year, had transmitted to him through Dr. Edward Rutledge additional memoirs on Dr. Sims, which he desired to present to the Society and have attached to the bound copy of his address, which he generously donated.

The Secretary read a letter from Dr. B. Kater McInnes, in which he expressed his gratitude to the members of the profession for the great kindness shown his brother.

The Secretary read a letter from C. S. Barrett, Fiscal Agent of Arts Building, Inc., in which it was proposed to open negotiations for the construction of a professional building.

All these letters were received as information.

Under Miscellaneous Business, Dr. Robert Wilson called the attention of the Society to the coming visit of Dr. Wilfred Grenfell to Charleston, stating that he would lecture at the Academy of Music on the evening of January 30th, and inviting the members of this Society to attend this lecture. Dr. Wilson also moved that this Society hold a public reception for Dr. Grenfell in the Society Hall on the afternoon of January 30th, at 5 P. M. This motion was carried.

Dr. F. B. Johnson directed the attention of the Society to the fact that the Tri-State Medical Association of Virginia, North Carolina and South Carolina would meet at Greensboro, N. C., next month. He stated also that this society had not met in Charleston for about ten years, and moved that this Society extend an invitation to the Tri-State Medical Association to meet in Charleston in 1930, and that a committee be appointed to extend this invitation. This was seconded and carried.

The President stated that it was his sad duty to announce the death of Dr. G. Fleming McInnes on January 12th, 1929. It was moved, seconded and carried that the President appoint a committee to draw up resolutions of respect for Dr. McInnes.

Dr. Wilson moved that a committee be appointed to arrange for the public reception for Dr. Grenfell, the President of the Society to be made Chairman. Seconded and carried.

The Scientific Meeting was called at 9 P. M.

Dr. R. B. Taft gave a brief talk on the Grenz Ray.

Dr. Wythe M. Rhett exhibited a case of a child of six years who had a loud systolic murmur which could be heard above the cranium. The case was examined and discussed by the following: Drs. R. Wilson, Buist, Chamberlain and Kollock, Dr. Rhett closing.

An obstetrical case report was made by Dr. R. L. McCrady. He discussed a case of toxemial pregnancy which was treated by the conservative method. The patient was recovering from disease when she developed influenza and died of broncho-pneumonia.

The paper of the evening was read by Dr. H. W. de Saussure on "Toxemias of Pregnancy". This paper was discussed by Doctors McCrady, Cannon, and Townsend, Dr. de Saussure closing.

There being no further business, the meeting adjourned.

W. Atmar Smith, M. D., Secretary.

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL, TUESDAY EVENING, JANUARY 8TH, 1929, AT 8:30 O'CLOCK.

The meeting was called to order by the President, Dr. Henry P. Jackson.

Present: Doctors; Allen, Beach, Burn, Byrnes, Cain, Cannon, Cathcart, Chamberlain, Deas, de Saussure; Finger; Jackson; F. B. Johnson, Kollock, Lynch, McCrady, Maguire, Mood, O'Driscoll, Phillips, F. R. Price, W. H. Price, Prioleau, W. P. Rhett, Rutledge, W. A. Smith, Taft, Townsend, Waring, I. R. Wilson. (30).

Guests: Dr. R. H. Lanning, U. S. N.; Dr. J. P. Palmer, Roper Hospital internes and medical students.

The minutes of the meeting of December 11th were read and confirmed.

Under Reports of Officers and Committees Dr. K. M. Lynch, Chairman of the Committee on Arrangement for the State Medical Association, made the following report:

Meeting of the Committee on Arrangements for the State Medical Association, with the President, Dr. R. E. Hughes, the Secretary, Dr. E. A. Hines, and Dr. Hugh Smith of the Scientific Committee, December 11th, 1928, 5 P. M.

1. It was decided that, on account of the heavy tourist congestion here during April, the meeting should be held May 7, 8, 9.
2. That the Francis Marion Hotel should be designated "Headquarters".
3. That the Faculty of the Medical College should be requested to schedule a series of clinics, at Roper Hospital, for the afternoon of May 7th.
4. That the forenoon session of the 9th should be a clinic session, beginning with a clinical-pathological conference, the schedule of the clinics to be arranged by the local committee.
5. That the scientific committee be advised to limit the number of papers on the program, for the remainder of the sessions, to 20.
6. That the invited guests of the Association should make their addresses on the evening of the 8th, followed by the reception to the President.
7. That there be no scheduled Golf Tournament but that arrangements shall be made for those who wish to play, at the Charleston Country Club.
8. That no formal entertainment of the Association other than the reception to the President be scheduled.
9. That especial attention be paid to presenting an outstanding scientific exhibit.
10. That particular arrangements be made for caring for an unusual commercial exhibit.

This was received as information.

Under Miscellaneous Business, Dr. R. S. Cathcart stated that the officers of the Charleston Exchange for Woman's Work desired to give to the Medical Society of South Carolina certain funds, the interest from which to be used by the Orthopedic Department at the Roper Hospital. Dr. Cathcart then read the following Deed of Trust:

STATE OF SOUTH CAROLINA.

KNOW ALL MEN BY THESE PRESENTS, That Charleston Exchange for Women's Work in the City of Charleston, South Carolina, hereby donates, gives, grants, assigns, sets over, and delivers unto the Medical Society of South Carolina, as Trustee, the sum of One Thousand, One Hundred Twenty-two and 65/100 ($1,122.65) Dollars, in trust to and for the following uses and purposes, that is to say: In Trust to have, hold, manage and invest the same and to apply the interest and income arising therefrom, to and for the use and benefit of the Orthopedic Department of the Roper Hospital in the City of Charleston, South Carolina, the said funds or trust estate to be known as the Memorial of the Charleston Exchange for Woman's Work, the principal or corpus of said Trust to be kept intact and only the income and interest thereof to be used, as hereinabove set forth.

Dated at Charleston, S. C., in duplicate, this the _____ day of January, Anno Domini 1929.

CHARLESTON EXCHANGE FOR WOMAN'S WORK,

By Nellie H. Holmes,

Signed, Sealed and Delivered in the Presence of:

Mrs. George S. Holmes, President,
Mrs. J. H. C. Wulbern (E.H.W.) Secretary,
(Mrs. F. M.) M. R. Robertson, Treasurer.

The Medical Society of South Carolina hereby accepts the foregoing trust and as Trustee thereunder agrees to execute same in accordance with the terms and provisions of the above Deed of Trust.

IN WITNESS WHEREOF the said Medical Society of South Carolina has caused these presents to be signed in duplicate by its proper officers and its Corporate Seal to be hereunto affixed this the _____ day of January, A. D. 1929.

MEDICAL SOCIETY OF SOUTH CAROLINA,

By H. P. Jackson, President,
William Atmar Smith, Sec'y.

Signed, Sealed and Delivered in the Presence of:

F. O. Bates,
Emma B. Rutledge.

Dr. Cathcart then moved as follows: Moved that the Medical Society of South Carolina accept the Trust as deeded by the Charleston Exchange for Woman's Work and hereby instructs the president and secretary to execute this acceptance on the part of the Society. Also, that a committe of four (4) consisting of the president and secretary of this society, the chairman of the Board of Commissioners and the chairman of the Board of Finance, be appointed to meet with the committee of ladies from the Charleston Exchange for Woman's Work to accept the formal delivery of the Deed of Trust and Fund; and that this committee after receiving the Fund, shall turn it over to the Board of Finance, who will invest it in accordance with the terms of the Trust. This motion was seconded and carried.

The regular order of business having been completed, the special order of business, arranged by the Program Committee, consisting of the Annual Report of the Board of Finance, was then taken up. Dr. R. S. Cathcart, Chairman of the Board, reported as follows:

January 8, 1929.

To the President and Members of the Medical Society of South Carolina.

Gentlemen:

The Board of Finance beg leave to submit this, their annual report.

We are charged with the audits of the books of all officers and committees having charge of

receipts and expenditures of all monies for the Society.

According to our custom we have had a certified audit of the books of the officers and committees and submit, with this, as our annual report the certified reports of the Auditor, as follows:

An audit of the books of the Board of Finance;
An audit of the books of the Committee on Ross Estate;
An audit of the books of the Treasurer of the Medical Society;
A report regarding the Minute Book of the Secretary of the Board of Finance.

Your Board would call attention to the fact that according to the arrangement of the Board of Commissioners of the Roper Hospital returning to us certain funds for the purpose of reimbursing the Keitts Bequest, that the Keitts Bequest has been restored to its original amount of $32,000.00. We would suggest that this arrangement be continued between the Board of Commissioners and the Board of Finance, beginning January, 1930, or sooner, if possible, until such time as the Kings Daughters donation of $9,000.00 and the original Roper Bequest are reimbursed. When this is done all Bequests that have been made to the Society will be intact.

We would call your attention to the fact that the Roper Fund is the only Fund in the Society's possession the principal of which may be used in case of any unusual demand, only the interest of the other Funds being available for maintenance. The interest of the Roper Fund, if restored, would be sufficient to pay necessary expenses and the Fund itself would be available for other purposes if the occasion demands.

Respectfully submitted,

Edward F. Parker, Secretary,
G. McF. Mood, Treasurer,
R. S. Cathcart, M. D., Chairman,
H. P. Jackson, President Ex-Officio.

Enclosures.

It was moved that the Report be accepted, and the recommendation be adopted and that the Board be graciously thanked for the excellent services rendered during the past year.

The Chairman of the Board of Finance then brought up the matter of Dr. Barnwell's paying only ten dollars ($10.00) dues when fifteen dollars ($15.00) is the established fee for membership in this Society. This matter was discussed by Dr. Cannon, the Treasurer, who stated that he had made every effort to collect the full amount, as instructed by the Society at its last meeting, but had failed. It was moved, seconded and carried that the Treasurer see Dr. Barnwell and discuss the matter with him personally before taking further action.

Dr. R. S. Cathcart, Chairman of the Committee on the Ross Estate submitted the following report:

January 8, 1929.

To the President and Members of the
Medical Society of South Carolina,
Charleston, S. C.

Gentlemen:—

The Committee on Ross Estate beg to report that during the past year through our attorneys, Messrs. Hagood, Rivers and Young, and in conjunction with the Presbyterian Hospital of Philadelphia, Pa., we have been making every effort to close up the Ross Estate and have made a formal request on the trustees of the Mary Jane Ross Estate for a formal distribution of the estate at this time. This has involved several meetings of your committee and several trips on the part of Messrs. Hagood, Rivers and Young to Philadelphia for conferences.

As a result of these conferences we have agreed with the Presbyterian Hospital and the trustees of the estate of Mary Jane Ross to settle the estate at this time, and your committee, on the advice of their attorneys, have adopted the following and similar action has been taken by the trustees of the Presbyterian Hospital in Philadelphia:

WHEREAS Mary Jane Ross, late of the City of Charleston, South Carolina, by her will gave her residuary estate to her trustees therein named In Trust to sell and convert the same into money at such times as the said Trustees might deem proper and to pay over the proceeds of such sales in equal shares to the Presbyterian Hospital in Philadelphia and the Medical Society of South Carolina, Trustee under the Will of Thomas Roper, deceased, and

WHEREAS by codicil to her will she further provided that with the approval of her Trustees and both said beneficiaries, partial distributior of her residuary estate might be made in securities or real estate at a valuation and appraisement to be jointly approved by her said Trustees and by both said beneficiaries, and,

WHEREAS for the purpose of making such distribution in kind, Frank H. Massey, a real estate broker in the City of Philadelphia, has appraised certain of the real estate comprising said residuary estate, to wit: premises 427 Market Street and 416 Commerce Street, 1504 Market Street, 33 South 15th Street, 415-17-19-21 Commerce Street, 2011 Arch Street and 620 North Marshall Street, Philadelphia, at a total valuation of $1,120,000, and,

WHEREAS the Trustees have an interest in the premises, 1617-19 Market Street, Philadelphia, subject to the interest of the Pennsylvania Railroad Company therein, for which interest of the Trustee the Railroad Company has offered to pay fifty thousand dollars ($50,000.00) but none of the parties hereto are willing to accept same

and have agreed, however, that the commissions payable to the Trustees in relation to said property shall be five per cent (5%) of fifty thousand dollars ($50,000.00), the amount so offered by the Pennsylvania Railroad Company for the interest of the Trustees in said property and thus making the total agreed valuation, one million, one hundred seventy thousand dollars ($1,170,000.00) of all the remaining real property of the estate of the late Mary Jane Ross in Philadelphia,

NOW, THEREFORE, be it

RESOLVED: That the Medical Society of South Carolina accepts distribution in kind of the said real estate at said valuation and that the said Trustees under the Will of Mary Jane Ross, deceased, be requested in distribution of said real estate to convey the same to the Presbyterian Hospital, in Philadelphia, and the Medical Society of South Carolina, or to their respective nominees, as tenants in common;

RESOLVED FURTHER that the said Trustees be requested to convert into cash the personal estate comprising the balance of the residuary estate of the said Mary Jane Ross, and after deducting the Trustees' commissions and other proper charges and expenses, to divide the same equally between the Presbyterian Hospital in Philadelphia, and the Medical Society of South Carolina, and

WHEREAS by the said Will of the said Mary Jane Ross it is further provided that the said Executors and Trustees shall receive a commission for their services at the rate of 5% on principal, including real estate,

THEREFORE, be it

RESOLVED: That the Medical Society of South Carolina consent and agree that the commissions to the said Trustees on the real estate to be distributed in kind shall be at the rate of 5% upon the valuations herein stated, and that if the personal estate in the hands of the Trustees is insufficient to pay such commissions, together with other proper charges, the Medical Society of South Carolina will pay to the said Trustees one-half of any such deficiency.

RESOLVED: That the proper officers of the Medical Society of South Carolina be authorized and directed to execute such agreements or other instruments, and perform such acts as may be necessary or expedient for the purpose of securing the distribution of said estate in accordance with the direction of this resolution."

Your committee (who have full power to act) have taken this action for the Society and we would request that a formal resolution be passed at this meeting confirming this action of your committee.

Very respectfully,
G. McF. Mood,
A. J. Buist,
H. P. Jackson, Pres. Ex-Officio,
R. S. Cathcart, M.D., Chairman.

Dr. K. M. Lynch proposed the following resolution:

BE IT RESOLVED: That the Medical Society of South Carolina do hereby confirm this action regarding the appraisal and settlement of the residuary estate with the Trustees of the Mary Jane Ross Estate and all previous actions on the part of the Committee on Ross Estate in the settlement of the estate of Mary Jane Ross with the Trustees of the said estate. This resolution was seconded and carried.

The Scientific Program was called at 9:45 P. M., after the completion of the special order of business.

Dr. D. L. Maguire read an able paper on Head Injuries. In this paper he analyzed ninety-nine (99) cases of head injuries which had occurred on his service at the Roper Hospital. They were discussed by Dr. Chamberlain, Dr. F. R. Price, Dr. Allen, Dr. Burn, Dr. Townsend, and Dr. Taft, Dr. Maguire closing.

There being no further business, the meeting adjourned.

W. Atmar Smith, M.D., Secretary.

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LAURENS COUNTY MEDICAL SOCIETY MEETING

The Laurens County Medical association elected officers to serve during the ensuing year at the regular monthly meeting held in the office of Dr. R. E. Hughes in Laurens on last Monday, February 4, 1929. Dr. Hughes was elected president; Dr. T. L. W. Bailey, first vice-president; Dr. W. T. Pace, second vice-president, and Dr. J. L. Fennel, secretary-treasurer.

Dr. C. N. Wyatt and Dr. R. E. Hughes read interesting papers which were discussed by the assembled doctors.

The next meeting of the association will be held in Laurens on the fourth Monday in February.

J. L. Fennel, Sec'y.

NEWS ITEMS

The Southern Pediatric Seminar has a large number of scholarships at its disposal this summer for the physicians in the smaller communities who are interested in the diseases of children. South Carolina is entitled to several of these free scholarships. They include both board and tuition for a period of two weeks in the summer at Saluda, N. C. Application should be made to Dr. D. L. Smith, Registrar, Spartanburg, S. C., or to the Secretary of the South Carolina.

The Fifth District Medical Association will be called together at Chester about the middle of March for the purpose of reorganization. Dr. J. R. Des Portes, Fort Mill, S. C., the Councilor of that District, is now receiving titles of papers to be read. It is expected that the officers of the State Medical Association and other visitors will be present.

Dr. E. E. Herlong who for some time has been the efficient Secretary of the Florence County Medical Society has moved to Rock Hill.

Dr. W. R. Wallace of Chester was elected Vice President of the Tri State Medical Association at its meeting in Greensboro.

The Pickens Medical Society under the Presidency of Dr. W. B. Furman held its February meeting at Easley. The meeting was well attended. Dr. E. A. Hines, Secretary of the State Medical Association was present and spoke on Undulant Fever.

Dr. Norma P. Dunning, physician at Winthrop College, was recently elected President of the York County Medical Society.



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EDITORIAL

POST GRADUATE COURSE MEDICAL COLLEGE 1929

The faculty of the Medical College of the State of South Carolina after giving the matter due consideration decided to put on the Post Graduate Course for the physicians for this and nearby States from May 27 to June 8 inclusive. Since these courses were inaugurated in 1927 frequent conferences with individual physicians and officers of the State Medical Association has led to continued improvement in the schedule of clinics and lectures. The first attempt made in 1927 was an unusual success there being enrolled about one hundred and fifty physicians. Last year the enrollment was not so great but there was a satisfactory attendance. Financial reverses in various sections of the State have had some effect perhaps along this line but the fact remains that the instant popularity of the effort portends great success again this year. Full details of the courses to be offered will be published in the April issue of the Journal. Numerous requests have come to the officers of this movement from various parts of the country to learn more about it. The plan has evidently attracted great attention from many other institutions.

PROGRAM FOR CHARLESTON MEETING FILLING UP

Following the notice in the last issue of the Journal requesting titles of papers to be sent in to the Secretary by those who intended to present papers at the meeting of the State Medical Association, May 7, 8 and 9, quite a number of replies were received. Many of these papers indicate an intense interest in providing an attractive program. At this writing there are a few places left on the program for additional papers. These should be sent in at once in order that the Scientific Committee may group them properly.

SOME NEWS ABOUT THE CHARLESTON MEETING

The invited guests of the Association this year are as follows: Dr. Walter E. Dandy, Associate Professor of Surgery in the Johns Hopkins Medical School; Dr. H. P. Wagener, Associate Professor of Ophthalmology Mayo Clinic; Dr. Roe E. Remington, Director of Laboratory South Carolina Food Research Commission in affiliation with the Medical College of the State of South Carolina.

One of the special features of the meeting will be a much more extensive scientific exhibit. It is desired that contributors to this worthy cause notify the officers of the Association at an early date.

The meeting this year should be particularly attractive for the wives and daughters of the members. It is expected that the Woman's Auxiliary will provide an excellent program in addition to the many other inviting features of the city of Charleston.

The following information is available in regard to hotels: The Francis Marion Hotel, Headquarters and place of meeting, will accommodate as many as 300 at a $3.00 rate, except for single rooms. Anyone wanting a single room or special accommodations may make reservation at regular rates. The Fort Sumter has a rate of $3.50 to $4.00 per day for single rooms and $5.00 to $6.00 for rooms occupied by two persons. The St. Johns Hotel, single with bath $2.50, double with bath $2.00 per person, single without bath $1.50, double without bath $1.25 per person. Charleston Hotel, single without bath $1.50, double without bath $3.00, single with bath $2.50, double with bath $4.00. Argyle Hotel, $1.50 per person without bath, $2.00 to $2.50 per person with bath. Timrod Inn, one person with bath $1.75, $2.00 and $2.50; one person without bath $1.25 and $1.50, two persons with bath $3.50 to $4.00, two persons without bath $2.50. Reservations may be made directly with the hotel desired or through Dr. H. P. Jackson, 109 Broad St., or Dr. Kenneth M. Lynch, Medical College, both of Charleston, S. C.

ORIGINAL ARTICLES

*THE SPECIALITY OF UROLOGY

Milton Weinberg, M. D., Sumter, S. C.

The foundation of urology was started 2500 years ago among the Hindus. Catheters and sounds were then used; perineal lithotomies were performed and widely practiced. Extending through the middle ages, only a little more was done. During the eighteenth and nineteenth centuries, the frame-work of modern urology was constructed. The edifice was completed by the present generation of workers. Between ten and fifteen years ago, the profession, after critical inspection, decided that the structure was substantial.

The development of urology, until recently, and recognition as a specialized entity have been rather slow. Even ten years ago, in very many places, we were snubbed or sneered at as venereologists. Positions of great responsibility in our hospitals were refused. The Johns Hopkins Hospital was probably the first in this country to have a well organized urological department. In 1911, The Massachusetts General Hospital, the first in New England, created a urological department, and put it under the supervision of a urologist. Today, there are comparatively few hospitals which do not have a department of urology with a well trained specialist in charge.

Twenty-five years ago, there were a few well trained urologists scattered throughout the country; now there are about 800 members of the American Urological Association, and this organization does not comprise near all in this country. The large majority now are not only doing the diagnostic work of the urinary tract, but the major surgery as well. The urologist is called upon to contribute the authoritative literature on subjects dealing with the medical and surgical aspects of genito-urinary diseases for systems of medicine and surgery. All of this could only have been accomplished by demonstrated ability and superiority in the handling of this line of work. In order to do urological surgery most effectively, besides the knowledge of surgical technique, one must have an intimate knowledge of bacteriology, physiology, chemistry, pathology, and all of the established diagnostic and therapeutic procedures pertaining to the genito-urinary tract. there must be introduced into an operation the personal equation of the operator.

There exists today among some of the profession a distinct opposition to the specialist. The fundamental principle of specialism in the practice of medicine, to my way of thinking, is indisputably sound. Centuries before the Christian era, Herodotus writes of Egyptian medicine, "The art of medicine is thus divided among them: Each physician applies himself to one disease only, and not more, all places abound in physicians; some physicians are for the eyes, others for the head, others for the teeth, others for the intestines, and others for internal disorders." The Hippocratic oath requires the general practitioner of medicine to promise never to perform a lithotomy, but to leave that work to those who have made special study of the operation. And we may recall that this operation at that time was performed by the laity. So, then, we see that the old bogy that specialism is a fad, cannot be sustained. Specialism is hoary with age as to the medical profession and permeates other professions and human activities. It is the step toward attaining the ideal. That it has its share of abuses, there can be no doubt. The same thing, however, might as well be said of almost any other worthy institution.

In my opinion, a man who is not well trained in general medicine and surgery should never practice a specialty. No function or disorder of the human body can be intelligently attacked without a consideration of the human organism as a whole. A man does not have to be an expert mechanic to run an automobile or tell when that automobile is not running properly and needs a mechanic. So then a urologist who is well fitted for the work should

*President's address before the Urological Association of South Carolina, Charleston, S. C., October 30, 1928.

have the confidence of the profession in his ability to take full charge of the patient and decide whether or not he needs assistance concerning other conditions outside of the urinary tract. He is fully capable of deciding when to call in an internist, general surgeon, otolaryngologist, or any other specialist.

Let us now briefly mention some of the monumental work that has been achieved almost entirely through the labors of the urologic specialist. Surgery of the prostate gland, within the last twenty-five years, has had its mortality reduced from a very high mortality rate, almost prohibiting this operation, to about 3 to 5%. Many of the men who are responsible for this are still living. They emphasized and established the pre-operative and post-operative principles of treatment, such as preliminary drainage, tests of renal function, survey of the patient as a whole, etc. These now become fundamental principles of all surgery and are now in common use. A few years ago, the only attention that was given to the urinary tract in the field of general surgery was that of making a urinalysis.

In 1885, the mortality for operations on the kidney, according to Gross, was around 20%. In 1912, that splendid surgeon, Gerster, reported a mortality of 12% in a large number of cases operated on by general surgeons. In response to a questionnaire sent out by Caulk last year to about 200 urologists, the information received showed a mortality of 3.8% in 22,148 cases which they had operated on. Caulk states, "This stands out in striking contrast to previous reports of mortality rates of the leading American institutions."

Beer, in 1910, introduced fulguration for the treatment of certain types of bladder tumors, especially the benign papilloma. Up to this time, in this type of tumor, results were very unsatisfactory from surgery. Open operation usually resulted in multiple recurrences on account of implants.

With the discovery of a suitable medium for rendering the upper urinary tract opaque, urology has become more exact from a diagnostic standpoint than any other field of medicine. I think we can safely say that a positive diagnosis in diseases of the genito-urinary tract may be made in 90 to 95% of the cases. This procedure was suggested about 1901, but perfected in 1915 by the introduction of the use of thorium nitrate solution by Burns. Since then, other opaque media have also been used.

About 1910, Rowntree and Geraghty introduced the phenolsulphonephthalein test for estimation of renal function. Since then blood tests for nitrogen retention have come into common practice as another aid in estimating renal activity. The value of these procedures cannot be over estimated.

Of all the armamentarium of the urologist the cystoscope stands out most conspicuously, both for diagnosis and therapy. Nitze, in 1876, invented a cystoscope. A few years after the invention of the electric bulb by Edison, electrically lighted cystoscopes came into use. In 1886, Brenner succeeded in catheterizing one ureter in a female patient with the cystoscope. Previous ureteral catheterization had only been done by open operation or after the method of Simon in 1871, who placed the finger in the urethra and guided a catheter into the ureter; or in 1886, Pawlick, by placing a speculum in the vagina and guiding a catheter with the finger. Of course, it is readily seen that such methods were impracticable. In 1897, Albarran perfected his catheterizing cystoscope. Various designs of cystoscope instruments have been introduced by Buerger, Lewis, Young, McCarthy and others. In 1893, Brown, of the Johns Hopkins Hospital began ureteral catheterization with the cystoscope, on the male. A little later Howard A Kelley introduced a practical method in the female.

In the field of prevention of useless operations, the urologist has made a wonderful contribution. In order to save the trusting public from unnecessary operations in the right part of the abdomen alone, the existence of the urologist would be justified. I refer especially to the elimination of unnecessary operations on the gall-bladder, appendix, right ovary and tube when ureter or kidney is at fault. The catheterizing cystoscope has saved enormous numbers of kidneys from coming to operation by ureteral dilatation, pelvic lavage, etc., when the pathology was in this portion of the urinary tract. Internal and external urethrotomies were frequently done not many years ago. They are seldom performed now owing to

the fact that the large majority of urethral strictures can be successfully treated by gradual dilatation. Urethral manipulation through the catheterizing cystoscope is usually successful in aiding in the expulsion of stones from the ureter. Many of these cases would otherwise have to be operated on. The punch operation for certain types of vesical obstruction has materially simplified the handling of such cases. Strictures and kinks of the ureter which are quite common can be easily dilated through the cystoscope and thereby bring relief to the patient in many cases which otherwise a major operation would become necessary.

In regard to the present status of urologists I will quote from Caulk, "Having demonstrated the ability to execute the highest type of urological surgery, and at the same time reduced the necessity for it, has been a beautiful part of urological progress, and typifies what we may call moral excellence, the bright consummate flower of all progress."

In closing, I wish to say that we would be unworthy, if we do not carry on the bright torch of urological progress that has been handed us. There will ever be work to perform to increase the value of our heritage, and to keep it modern. The goal can never be reached, nor perhaps do we wish it to be, because if it were, we would surely be out of line with all evolutionary processes that go on forever. Let the progress that has already been made be a stimulus to work untiringly for greater achievements.

I feel it my duty to say a word in regard to The Urological Association of South Carolina. There is a definite need for this organization; no other medical society can take its place. It is plainly our duty to always work for the betterment of ourselves and the enlightment of the profession along urological lines.

I again wish to express my gratitude to the members of The Urological Association of South Carolina for the signal honor of electing me its first president. For the perpetuation of its principles and ideals, I shall ever be at its service.

*A PEDIATRIC CONSIDERATION OF ACUTE OTITIS MEDIA IN INFANTS

By C. W. Bailey, M. D., Spartanburg, S. C.

Many of the grandparents of our patients wonder how and why this new fad of ear trouble in babies came into existence. We hear of large families which have had no concern about infected ears and we may well stop to speculate about this. We have a right to believe that much of the so called colic, teething, indigestion, and other acute illnesses in babies some years ago was really acute otitis media. Grandparents often relate how a baby cried for several days with stomachache and finally an ear began to run and the baby immediately got relief. The astounding facts brought out about two years ago by the improved hearing tests of school children make us more keenly feel our responsibility in treating all acute illnesses in babies. Of the three million deafened school children in this country reported by Dr. Fowler after his extensive tests with the audiometer, quite a large proportion must be the result of neglected acute otitis media during infancy. This deduction is particularly striking in view of the fact that Otitis media is many times more common during the first two years of life than during all the rest of an individual's existence.

But it is not necessary to summon statistics in order to stress the importance of ear infections in babies. It is only necessary to keep busy with acutely ill infants all of one winter and note the proportion of the work that is done with troublesome ears. In briefly summarizing a few cases some of the more important symptoms can best be stressed.

Just a short time ago I saw a baby 18 months old because the mother wanted him examined. He had had no symptoms of being sick except for a trivial cold three weeks before. The child's ear drums were tensely bulging, white and greatly thickened and both ears drained profusely for two weeks after they were opened. After the ear trouble was located several members of the family said they had noticed the baby being inattentive or partly deaf for some days. There was no history of cry-

*Read before the Second District Medical Assn., Batesburg, S. C., January 16, 1929.

ing, pain, fever, or disinclination to play. This family was of the highest type so that it is fair to assume that no symptoms escaped because of ignorance or lack of attention. Going to the other extreme, I have often seen infants who have been acutely ill for a week or more with high fever, vomiting, cough and profound stupor. In this type of case the chest is full of all types of rales and the respiration very rapid. Even though the ear drums are bulging and after being opened drain much pus these cases appear to be typical broncho-pneumonia. The next day, however, these infants are comparatively free of all symptoms and are often sitting up playing and taking food well. In such cases the child has had time to recover from the initial fever caused by the acute infection of the throat and only the ears remain to produce the marked general disturbance noted. This is why drainage of the middle ear sometimes so promptly relieves the toxemia. In these cases we usually find an abnormal pulse-respiration ratio, the respiration frequency being often greater than one to two heart beats.

A case which deserves mention was a baby two years old who had cried for about 24 hours with his left arm hurting. The child was examined all over and nothing found wrong until the ear drums were seen. The right ear was bulging and when this was opened the child got instant relief and never mentioned his arm again. Babies are frequently seen crying with pain which they cannot localize and an ear is found at fault. Often it is the abdomen which the child complains of but probably most often there is crying and fretting and restlessness with no hint as to the location of the discomfort. As a general rule the pain is spasmodic and not continuous and the most severe pain is found when the drums show a diffuse redness and no bulging. After the bulging is marked there seems to be less acute pain and more general or systemic disturbance. This lack of pain is observed more in infants than in adults. It is difficult to explain unless we assume that when the pressure reaches a certain point it either produces a pressure anesthesia, or else the tissue of the drum can be stretched more in infants without producing pain.

Vomiting is by far the most constant and characteristic symptom of infected ears in infants. A baby may have very little or no fever and continually regurgitate as a result of bad ears or there may be violent and uncontrollable vomiting during the acute stage of otitis media. If a baby vomits during the winter season and there is no marked dietary error it is a safe guess that the cause is acidosis complicating a throat infection or it is an infected ear, and the ear is the more probable. Many times parents have phoned that their baby is vomiting or spitting up and they ask how to change the diet to correct this. When the child is seen and a bad ear is found as the cause of the vomiting, the parents are not only surprised but skeptical. However, when the ear and not the stomach receives all the attention they are quickly convinced by the results obtained.

Diarrhoea with or without vomiting is the serious complication of acute suppurative otitis media seen in infants during the spring particularly May. In looking over my cases for the past two years I was struck with this fact. Diarrhoea during the winter is not uncommon but it is much less common and is less severe than during Spring. Most of these ears suppurate quickly and when they are drained the diarrhoea does not subside. The question very naturally arises as to whether the ear infection is primary or secondary to the diarrhoea, which symptomatically is of the infectious type. In most cases the ear infection is present in the very beginning of the illness, but there is a fair proportion of cases in which the ears are normal in the beginning and towards the end of the first week they become reddened and suppurate. There is clinical evidence on both sides.

There is always a fairly large proportion of infants who do not completely recover after an acute attack of sore throat with otitis media. These babies may go for weeks or months with moderately red ears, a little fever most of the time, and very poor appetite. They are difficult feeding problems because of lack of appetite and for this reason they often become pale and undernourished. It is hard to say what place the ear infections play. There is practically always a subacute nasopharyngitis and it is logical to attribute both the symp-

toms of the mild infection and also the persistent redness of the ear drums to this.

So it may be seen that acute otitis media in infants may cause a multitude of symptoms and clinical pictures. There may be vomiting, fever, pain, diarrhoea, extreme nervousness or stupor, loss of appetite and consequent malnutrition. These symptoms may be in many combinations and may vary in degree. The problem is necessarily of most concern to all of us who treat babies, though, most of us must rely on the otologist to touch the right spot and remove the cause of the trouble. Of course these serious disturbances lead to serious general disturbances in infants because of the instability of the infant's chemical and physiologic constitution. Too often we have to deal with extreme dehydration from acute inanition, vomiting, or diarrhoea; extreme acidosis; or sepsis; and death may result from these constitutional disturbances which were initiated by an infection locked up in the middle ear and mastoid antrum.

From the foregoing clinical sketch it is evident that, given only a symptom complex, or history, it would be impossible to diagnose acute otitis media without examining the ears. After having found one or both ears acutely red or bulging one still must consider all other possible causes and finally rule out everything else before the ears can be settled upon as the real cause of the disturbance. The total leucocyte count and the percentage of polymorphonuclears are both usually moderately increased, but there may be little departure from normal. Hence, in my experience, blood counts are of not much diagnostic value. A description of the many and varied appearances of the tympanic membrane would consume much time and will not be attempted here. However, it may be well to mention a few misleading characteristics of acute ear infections in infants. It is not uncommon to see an ear drum greatly evaginated with pus in one portion and appearing normal elsewhere. This is because the redundant mucous membrane lining an infant's middle ear becomes edematous and puckers up in folds thus partitioning off portions of the cavity. An infant's ear often suppurates so quickly that if the patient is seen only after a few days of illness the ear drum has lost all the initial redness and appears perfectly white. In these cases the loss of normal lustre and particularly the bulging are a definite indication that the middle ear is full of pus. It is well to note the prominence of the short process of the malleus. If the drum appears uniformly flat or rounded and the malleus is lost from view or relatively inconspicuous, it is certain that there is pus. This point is of most value to me in examining the ears of infants only a few weeks old. It is often extremely difficult as well as important to decide whether or nor the ear drum of these very young infants is bulging. Shrapnell's membrane or the superior portion of an infant's drum is often sagging with pus and the rest of the drum practically normal. The main point is that lack of redness does not mean lack of trouble, although redness is the usual evidence of otitis media in the beginning. Another important finding in infant's ears is the sagging or bulging of the posterior superior portion of the external canal. This always means pus confined under pressure in the mastoid antrum.

There is little of definite value to be said as to the etiology of acute otitis media in infants. As stated before it is much more common in babies under three years of age and it is probably most common from the sixth to the 24th month. As children grow older the nasopharynx becomes more spacious and the adenoids comparatively smaller, thus allowing better drainage and ventilation. I have noticed that children with a small nasopharynx or large adenoids are the ones who are having acute ear infections. Negroes have larger nasal cavities and mouths and more space in the nasopharynx and as a consequence one often sees negro babies who have running noses all winter but seldom have ear infections of any consequence. On the other hand mongolian idiots with their small nasopharynx have acute or chronic otitis media with great frequency. Accordingly, there seems to be ample evidence to show that the size of the nasopharynx or the size and condition of the adenoids are the factors which determine the frequency of otitis media in infants. There is no evidence that would lead one to believe that the middle ear ever becomes infected except from an infection

of the nasopharynx and thence along the eustachian tube. The eustachian tube in infants is relatively larger and shorter than in adults, thus facilitating the spread of infection from the throat or nasopharynx to the middle ear. On the other hand a large eustachian tube serves as a safety device for the ears by allowing drainage into the nasopharynx, provided that the tube is not closed by an edematous mucosa, inflammatory exudate, or adenoid tissue.

Cultures of ear discharges are of little or no value because of the general mixture of organisms found. As a rule the pneumococcus, staphylococcus, and some member of the streptococcus family predominate but there are practically always other contaminating bacteria. I have been told that at Harriet Lane the material gotten from acute otitis media cases for culture is now being obtained by aspirating the ear with a fine hypodermic needle before the drum is incised. This should eliminate most of the contaminating organisms.

It is so evident that it is hardly worth while stating that acute otitis media is always secondary to some other infectious disease which is more or less localized in the upper air passages. Chief among these are the common cold, influenza, scarlet fever, measles, bronchopneumonia, pertussis, and tonsillitis. Somewhat less common primary diseases are diphtheria and lobar pneumonia.

Since all these diseases are more prevalent in the colder months otitis media follows the same rule. Almost invariably young infants have both ears involved. If one ear is abscessed the other is found infected and soon fills with pus.

There is only one noteworthy prophylactic treatment for acute otitis media in infants. This is removal of the adenoids. It is a simple procedure and is usually remarkably effective. The operation can be done under primary chloroform anesthesia and in a few minutes the baby is wide awake. As a rule the throat is not sore and food is readily taken about two hours afterwards. Removal of the tonsils is not only not advisable but is contraindicated because of the age of the patient and because without this more serious surgical procedure the results are usually just as satisfactory. There are some cases in which the tonsils are enlarged and badly infected and should be removed. But even in these cases it seems more reasonable simply to remove the adenoids first, thereby securing what benefit that is forthcoming, and later when the child's general condition is better, remove the tonsils.

Vaccines are used in both prevention and treatment of these acute infections. Much is claimed by the pharmaceutical houses and some doctors are enthusiastic about vaccines. However, there always seems to be a difference of opinion as to their value. A vaccine probably gives excellent results in some cases but in most instances the results are questionable or indifferent.

Treatment of acute otitis media should be conservative. Early drainage of purulent ears is most conservative and is the safest thing to do. If the drum is diffusely reddened and not bulging one may use drops of 6 to 8 percent phenol in glycerin and watch for more definite indications of an exudate which should be drained. Often these ears get well without any treatment. The use of some menthol nose drops or Ephedrine Inhalant to shrink down the adenoids seems to help the ears by allowing better drainage and ventilation through the eustachian tube. Dr. Harold Hays of New York says that it is almost impossible to keep an opening in an ear drum patent when the eustachian tube is exercising its normal function. He thinks that in all cases in children the nasopharynx and upper air passages should receive very careful attention.

Any ear drum which requires opening should be opened wide from top to bottom. The location of the opening usually chosen is posterior to the malleolus. However, some operators make their incision anterior to the malleolus. After the ear is opened the treatment varies according to the Doctor's own individual ideas. Some insist upon frequent irrigations, others protest against this. As Dr. Morse tersely puts it some are "washers," some "wipers." If the discharge is thick and sticky it seems that irrigation keeps the incision open better. Boric acid solution with one ounce of peroxide to 8 ozs. of the solution has been very satisfactory in my practice. Cotton or gauze drains are sometimes used but these require

more constant expert attention than most of our patients can have. Instillation of the various antiseptic solutions cannot help much because there is always a current of fluid drainage outward through a very small opening and this prevents the antiseptic from penetrating the tympanic cavity to any extent. It is also well to keep in mind that in infants, the mastoid antrum as well as the middle ear is also being drained through the small opening in the drum.

The otologic treatment of these cases is most important if results are to be obtained but the general treatment of the child is of even greater importance. In a word this depends on the treatment of the various conditions as they arise, and on keeping up the food and fluid intake. The family physician or the pediatrist who is attending the case and the otologist should cooperate perfectly.

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*NUTRITION OF INFANTS AND PRE-SCHOOL CHILDREN

By William Weston, Jr., M. D., Columbia, S. C.

It is a privilege to be extended the honor to speak before your association and I am glad to have the opportunity to say something on this subject (Nutrition of the Pre-School Child) which is of vital importance to us.

The real significance of this subject is not appreciated by even well informed people despite the great amount of research which is being done in the science of nutrition. Few of us realize that although this science is in its infancy sufficient discoveries have been made and announced to materially influence civilization. This knowledge is so concrete and practical that to master end results is not a difficult task.

The importance to diet in its relationship to health has been appreciated for centuries. We find that it is recorded in history that the alleged founder of Medicine Hippocrates advised patients to be moderate in their diets and even prescribed certain articles of food such as milk, vegetables and fruits. We know that at this time these articles contain the essential elements of a good diet.

*Read before the Second District Medical Association of South Carolina, Batesburg, S. C., January 16, 1929.

If I may wander from my subject a minute I desire to relate a few historical facts that bear indirectly but forcefully upon this subject and well may you congratulate yourselves that you are living in this era rather than the one to which reference is made. In ancient times it was considered a problem of state to adopt whatever method that seemed to them effective in producing a strong and virile population. The Spartans, Romans, Arabians and other ancients (Chinese and Japanese) sought this end by means of infantacide. This was particularly practiced upon the female sex. If they had possessed the known ledge in the science of nutrition which is available at present the results would have been happier and far less repugnant to our sense of ethics.

Dathens of Milan in 787 A. D. founded the first asylum for orphans. They were given the best of foods and care to be had in that period. They were taught a trade and allowed freedom at the age of eight years. Perhaps this is where the idea originated of keeping a child in good physical state the first years of life and he would remain well throughout life. Here is the first idea of prevention through nutrition, which topic is our work in public health. During this pre school span physically they are molded while mentally they are perfect mimics. They are taught to think on entering school so must be good physical specimens if the best results are to be obtained.

Infant morbidity and mortality are highest in the first year of life. Often due to nutritional disturbances. Their digestive apparati are more sensitive and more readily upset than any other period of life. The return to normalcy is apparently rapid but unless the proper food elements are given the time will be all too short before a more serious prolonged illness occurs. Therefore, it must be evident that proper assimilation from the beginning is necessary to give the baby the constitution it deserves. The ability of the child to utilize food Finkelstein calls tolerance. When we speak of a good or poor digestion we mean a high or low tolerance. Nutritional disturbances designate the pathological changes taking place in the body during oxidation and reduction of food, thus the tissues are altered. Readily we understand why infection occurs in a malnour-

ished child. The invasion of the waiting enemy soon happens and the infection is met with little or no resistance.

Errors in diet may be quantitative or qualitative. Quantitative (a) overfeeding, vomiting, regurgitation, diarrhea.

(b) Under feeding is more serious and far more frequent. Mother is too anxious, consequently baby does not nurse sufficiently, else artificially fed the formula is weak. Soon the reserve supply is exhausted then the tissues themselves are called upon until we have the extreme emaciation of a poor little helpless infant to which term marasmus has been given.

Qualitative disturbances: We will not enter into this subject but suffice it by saying that (a) proteins, (b) fats and (c) carbohydrates cause nutritional disturbances while the carbohydrates are the most frequent at fault. Continued condensed milk feeding is common to each one of us when the baby appears well yet is flabby and anemic while the resistance to disease is almost nil. The tissues are water logged and the host serves an excellent media for any bacterial invasion. The salt and vitamin disorders are qualitative disturbances and are discussed further in more detail. Other disturbances are bacterial and constitutional.

Nutrition or feeding is the basis of pediatrics. Were it not for this branch then there would be no separate field of medicine for children but the research in this line enabling us to feed scientifically has caused the intelligent people to demand the trained service.

The stature or size of a person depends mainly on heredity, diet and climate. The diet is the most important of these as races of people in one place will vary from the same race in another mainly due to superior food. Does this not exist in our own state where men on the coast are small and wiry while in the hill section they are large, active and muscular.

The people of the South always took a leading part in the governmental affairs of the United States until the civil war when the milk and dairy products were almost cut off. Vitamins A B and C were diminished and soon malaria, pellagra and hookworm became very prevalent. These diseases are being gradually wiped out and the science of nutrition is being advantageously applied so that the leaders from the Southland will soon be heard from again.

Our state of South Carolina should be proud in being the pioneer to have a department of chemistry connected with the Medical College of South Carolina to analyze the mineral elements of the food products. The results of these investigations especially regarding the iodin contents of the foodstuffs of this state as compared with those of other states has been amazing. This should reap untold value to our farmers who are sadly in need of aid. The application of these interesting studies is our duty and we have our hands full in so doing.

The absence of any important food element from the diet causes an altered conduct, disposition and application. The continued lack of some substance like vitamin B has been known to cause nutritional instability characterized by the inability of sustained effort.

The resistance to infection depends largely on the physical stamina which in turn depends on the diet. During an epidemic the person getting a well balanced diet will remain immune longer and even though attacked the disease will usually be much milder. Rarely does tuberculosis develop in properly nourished children. The examination of school children reveals 96% show dental defects and about 50% have marks attributable to early rickets. An infection found travels to other organs and naturally we wish to stop this as soon as possible at its origin, but are we? The Board of Health in this state and in others is spending thousands of dollars for dental and orthopedic correction when the proper nutrition would have prevented this expenditure. Protect our race and save our state by prescribing the proper food. In order to do this thoroughly and correctly we should begin in the prenatal stage to give food to the mother which has a bounteous supply of calcium, phosphorous and fat soluble vitamin. Understand that these elements have a profound influence on the skeletal tissue including the formation of the foetus also the condition of the bones of the mother.

Rickets is a disease with which we are all more or less familiar. A deficiency disease characterized by bony deformity. Should we take Park's (Johns Hopkins) advice regarding the feeding of pregnant women, green vegeta-

bles and milk daily, exposing them to fresh air and sun and their infants were placed in the direct rays of the sun receiving cod liver oil every day for the first two or three years, then we would eradicate dental caries and abolish rickets from the earth. What a noble work you would be doing to materially reduce the number of cripples which can be accomplished with your efforts.

Why expose a child to the rays of the sun or the ultra violet? What is its action? The superficial layers of the skin contain cholesterol which is absorbed when acted upon by the proper rays thus causing the combination of calcium and phosphorous in the tissues. It is the same action as giving cod liver oil.

There is another problem which confronts us that applies more to the school than to the pre school child. This is the subject of goitre. It is definitely on the increase and more than½ of the United States lies in the so called goitre belt. We of South Carolina are so fortunate as to escape because our foods have the greatest abundance of that important mineral element iodin. Though it were for this reason alone you should advise the people to eat their own products, for you may well believe that should they be rich in one element they will contain a high percentage of the others.

Children require a greater amount of food per unit of weight than the adult as heat production is proportional to the body surface. Foods have five main functions, namely: "(1) To yield energy. (2) to build tissues. (3) To regulate body processes. (4) To promote growth in the young. (5) To preserve life and well-being."

Fats are the chief source of energy in the body and we derive them from meats, animal products, vegetables and grains.

Carbohydrates are the most economical of the food supplies. Their source is in cereals, vegetables, breads and fruits. A little free sugar should be added occasionally to insure the glycogen store.

Proteins are essential to life and their value depend on the number and variety of amino acids. Their source is found in the meats, eggs, leguminous plants and milk.

The ash exists as separate and distinct elements, chiefly among which are calcium and phosphorous. The child requires several times as much as does the adult. The action of the mineral elements is usually underestimated for they form a balance which when broken to any marked degree are not compatible with life. They are derived chiefly from plants. Iodin is a very small proportion of the body, only one part in three million parts of the body weight but it is an essential element.

The vitamins are not clearly understood as we do not know in chemical terms what they are, yet there is something which exists that has definite effects. There are five whose actions are specific.

A. Opthalmia. Source: Egg yolk, butter fat. Results: Eye disturbances.

B. Beri-beri. Source: Whole grain cereals. Results: Subnormal temperature, intestinal stasis. Nervous manifestations.

C. Scurvy. Source: Orange juice, tomato juice, fresh greens. Results. Bleeding. Delayed coagulation.

D. Rickets. Source: Cod liver oil, butter. Results: Bony deformity.

E. Reproduction. Source: Lettuce, whole wheat.

May this opportunity be taken to explain why the whole grain cereal is prescribed? Wheat does not contain as great a proportion of the essential elements as does rice or oats. Whole corn contains an abundance of vitamin A. If a cereal is stripped of its corticle and germ portions then the grain is markedly deficient in its nutritional value. When 30% of a child's diet consist in cereals then it is important to bear in mind the facts above related.

Your problems exist with the mother more than the child, therefore environmental conditions play a most celebrated role in the nutrition of a child. Orange juice was advised for a baby at a recent child hygiene clinic to which response was, "Do you expect me to give each of my seven children an orange a day? If you do, you are mistaken." No, I am not entering upon birth control but merely pointing out the difficulties under which you are handicapped. The education of the people is a slow process but you are accomplishing this end little by little.

The neuropathic child is often encountered.

The mother speaks little of her offspring but mostly of her own sacrifices and untiring attention holding a most pessimistic outlook for the child. Soon the father's patience is taxed upsetting his equilibrium and his worries center on the baby. Finally the damage is complete when the grandparents, uncles and aunts shower their nervous sympathies on the child. It shows a continual nervous irritability with a definite nutritional disturbance. We must try to bring order out of chaos and for this purpose advise isolation combined with the proper feeding.

Summer heat sickness is not uncommon with us in this climate. Frequently there are too many clothes on baby or several purges are administered in rapid succession. We should diminish the former and eradicate the latter which can be done with the proper feeding. This brings us to the soft drinks and pops, candies, cakes and hot dogs which are devoured in the United States like the proverbial 'hot cakes.' Let's keep working to use the natural beverages, milk and water in their stead.

Milk has no complete substitute. It has the essential elements, fats, carbohydrates, proteins, salts and vitamins. For what more could we ask? Milk is the unit of feeding and regularity is the keyword of its success. Use it and more of it. The fermented milks like buttermilk, acidophulus, lactic acid and Bulgarian all have their benefits in combating intestinal putrefaction and in diseases characterized by diarrhea. Dried milk is of value when fresh milk cannot be obtained, but additional foods like orange juice and cod liver oil should be given.

In conclusion feed the child the necessary articles (1) Milk (2) Green leafy vegetables (3) Whole grain cereals (4) Fruits (5) Meats from muscle alternating with meats of the internal organs. Give sunshine and water to complete the fertilization.

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*THE PHYSIOLOGY OF THE LIVER AND SOME CLINICAL APPLICATIONS

By J. Van de Erve, M. D., Medical College, Charleston, S. C.

Dr. Ray Lyman Wilbur, sometime Professor of Medicine in the Leland Stanford Medical School, now Secretary of the Interior in Hoover's Cabinet, writing an appreciation of the late Dr. A. W. Hewlett, keenly observes that "the modern practice of medicine is largely applied physiology. Within two generations physicians have remolded the major concepts upon which the care of the sick is based. For a time the science of medicine pushed the art of medicine into a secondary position. Now a rational method combining the two, is emerging." (1)

Dr. Hewlett, " a trained physiologist, who developed into a skilled practitioner," the author of "Pathological Physiology of Internal Diseases," was the pioneer in this country. Many years ago he gave us a translation of Krehl's volume, and so kept on revising it that presently the whole book was his work, an excellent one indeed.

Dr. J. J. MacLeod, when Professor of Physiology in the University of Toronto, published, less than a decade ago, his monumental work on "Physiology and Biochemistry in Modern Medicine," which by long odds is the most readable, the most scientifically and practically helpful treatise in medicine, worthy of a prominent place on an easily reached shelf in the library of the modern physician.

European physiologists have, years ago, worked towards the ideal of bringing the laboratory and the clinic closely together.

The chasm between physiology and functional pathology is rapidly being bridged, and the amazing development in biochemistry is doing the bridging. The civilization-wide and cumulative interest in periodic health examination, assuming in many states the proportions of a Mississippi flood-relief and preventive

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measures, are no small factor in shifting the physicians' primary aim from *getting a man well* to *keeping a man well*, or at least as well as he is at the time he presents himself for an overgoing.

If physiology does not increasingly and ultimately direct the study and define the practice of medicine to this end, it misses the mark and will be "bound in shallows and in miseries."

The fundamental reason physiology has been so long in securing some recognition is its profound ignorance, coupled with its pathetic theorizations. Little practical help ensues to the kidney-specialist so long as the embattled host of opposing physiologic theorists, like Ludwig and Heidenhain, preempt the floor for discursive argumentation concerning the purely physical absorptive power of the glomeruli and the vitalism of the tubule epithelium.

Undeniably the liver is the largest and the most important metabolic gland in the body economy, but our ignorance of its functions is still astounding, largely because the physiologist is so lamentably handicapped in his researches. Even the anatomy of the liver is far from finality. The most recent and most luminous contribution to liver structure is that of McNee. (See chart).

I can do little more in this paper than give an outline of liver functions and make brief comments on some of the newer findings, along with clinical applications.

Liver And Gall Bladder Anatomy

1. Gross—lobes; ligaments principally for lateral support, negative peritoneal pressure.
2. Microscopic (McNee's diagram much modified, showing relationship of biliary, blood, and lymph capillaires.)
3. Circulation—sinusoids, small hepatic artery, large portal vein, which carries 2/3 of liver blood.
4. Lymphatics—3 groups, sheaths around blood vessels.
5. Innervation—sympathetic for glycogenolysis, inhibits gall bladder; vagus stimulates gall bladder; no secretory fibers, ninth segment.

Physiology

I. Liver as a *secretory* organ
  1. Bile
    1. quantity and flow
    2. constituents
      1. water 97%
      2. solids 3%
        1. Bilesalts (5 other solids, see below II, 1)
          1. origin
          2. digestive action on
            1. fats—five fold increase
            2. proteins — due to alkalinity see also 3 and 4 below
            3. carbohydrates—see also in 3 and 4 below.
          3. intestinal peristalsis stimulated
          4. intestinal putrefaction retarded
          5. effect on cholesterol and gallstones
          6. reabsorbed
            1. to carry fatty acid into villi
            2. for a powerful cholagogue
            3. to carry cholesterol from blood into biliary capillaries.
          7. lengthens clotting time
          8. parthenogenetic activity
  2. Fibrinogen for clotting
  3. Antithrombin for prevention of intravascular clotting.
  4. Antiprothrombin for prevention of intravascular clotting.

II. Liver as an *excretory* organ
  1. Bile (excretion constituents)
    1. inorganic salts—mere waste
    2. mucin—mere waste
    3. pigments—jaundice, reticulo—endothelial system.
    4. cholesterol—relation to vitamines, pregnancy, nephritis, gallstones, etc.
    5. lecithin.
  2. Urea formation.
  3. Uric acid formation.

Gall Bladder

1. Concentrates bile.
2. Stores bile.
3. Excretes cholesterol.
4. Excretes mucin.

Drainage, cholecystography, etc.

III. Liver as a *storage plant*.
  1. Carbohydrates—as glycogen.
  2. Proteins.
  3. Fats.
  4. Inorganic salts.

5. Blood.

IV. Liver as a *chemical laboratory.*

1. Carbohydrates — glycogenetic functions, levulose test, etc.
2. Protein metabolism.
3. Fat desaturation.
4. Detoxications.
5. Lymph formation.
6. Hemoglobin genesis.
7. Iron conservation.
8. Thermogenic function.

V. Liver as an *electronegative organ* (Bipolar Theory of Crile.)

Anatomically it is worthwhile noting that the liver's ligaments serve merely to prevent displacements laterally, the heavy organ being held in position by the abdominal organs below, aided materially by positive pressure in the gastro-intestinal tract and negative pressure in the peritoneal sac and thoracic cavity.

According to Stengel (2) "negative pressure in the peritoneal cavity is an important if not the all-important cause of stable position of the liver."

The blood supply to the liver is via the relatively small hepatic artery under high pressure, and by way of the large portal vein at very low pressure. The former, which carries 1/3 of the blood volume, is plentifully invested with vasomotor nerves; the latter has no nerves and depends on variations of capacity bloodflow on changes in the liver itself and in the intestines.

The innervation of the mesohepar is by the phrenic, which accounts for referred pains in liver disturbances to the neck and shoulder regions; by the autonomic via its sympathetic division, T 6-12, stimulating glycogenolysis in the liver, and inhibiting the gall bladder; by the vagus, which stimulates the gall bladder, but, while entering the liver structure, has no known action there.

Enteroceptive fibers from the liver enter the cord at T 10-7. The ninth segment is diagnostically most significant, for it is the segment which transmits referred pain from the liver.

The functions of the liver may be classified under five heads.

1. The liver as a *secretory* organ. Bile is the important and most abundant secretion. It varies in daily quantity from ½ to 1 liter. It is secreted at a very low pressure, for which reason its flow is easily obstructed; but if 10-20% of total bile output enters duodenum, intestinal action is practically normal. Entire absence of bile from intestines is incompatible with life after 3-4 months. 97-98.7 % of bile is water, the rest solids.

Of the solids only the organic or bile salts, and possibly cholesterol, are true secretions, i. e. are of further use to the body. All the others are purely excretory products.

The liver monopolizes the formation of bilesalts; but only the cholic acid, possibly derived from cholesterol, is characteristic of liver functioning, the taurin and glycine being found in many tissues.

The digestive action of bilesalts is most pronounced on fats, increasing the splitting power of steapsinogen, which the bilesalts activate into steapsin, five fold. It does so by lowering surface tension between the oily fat and the aqueous lipase and by saponification, the soap formed providing a thin coating for the fat globules, preventing these from coalescing, and thus emulsifying the fat to make numerous surfaces for lipolytic attack.

It is highly significant that intestinal bilesalt deficiency will occasion greater fecal elimination of undigested fat than lack of the pancreatic fat enzyme.

The acceleration of carbohydrate and protein digestion is doubtlessly partly due, to the alkalinity of bile, neutralizing the duodenal acid chyme; but the bile salts take a very active part in the process by stimulating absorption and so removing end products, a well known method of speeding up and completing chemical reactions. Couple these last effects with the increased peristalsis, caused by the bilesalts, and it is not dificult to account for the retardation of bacterial action and putrefaction, elimination of intestinal contents being favored in both directions, *out of* the intestines *into* the blood stream and also *into* the colon and *on* and *out* by the feces.

Clinically, of therapeutic significance is the power of bilesalts, specifically its cholic acid radical, to hold cholesterol in solution.

To anticipate the next section, cholesterol is intimately related to the formation of a certain type of gallstones.

Following a high excretion of cholesterol in bile, associated frequently with a lessened secretion of bilesalts, precipitation of cholesterol ensues and stone formation is favored.

Rabbit's bile contains no cholesterol, but Dewey proved that in rabbits, fed on a rich cholesterol diet, multiple intra-hepatic stones are formed, infection results with a calcium-laden exudate, the accompanying inflammation interferes with the emptying of the gallbladder, and the stone grows apace, showing the usual stratification of calcium, bacteria, epithelial cells, leucocytes, around the cholesterol nucleus, and more cholesterol on the outside of these strata.

On this basis administration of bilesalts to prevent gallstones or dissolve them would seem to be a highly rational procedure, especially when it is remembered that the bulk of the bilesalts is reabsorbed for the double role of carrying fatty acids from the Jejunal lumen into the epithelium of the villi, and, in the liver, serving as a powerful cholagogue. Besides they carry cholesterol out of the blood into the bileducts.

A very interesting fact about bilesalts is their parthenogenetic power.

Loeb's work on arbacia is suggestive. Defining fertilization as restoration of lost power of nuclear—and cell-division, Loeb used bilesalts to stimulate an exhausted ovary, and so restored the power to its ova of nuclear division with excellent reproductive results.

The relation of the liver to *clotting* of blood is its production of fibrinogen, antiprothrombin and antithrombin.

II. The liver as an *excretory* organ. The bulk of bile constituents is eliminated in the feces, viz: inorganic salts, mucin, bile pigments, lecithin, and cholesterol. Only the latter is partly reabsorbed, the extent of absorption depending presumably on the quantity of lipoids ingested with food, and in response to tissue needs.

Though mere waste products the *pigments* deserve further consideration.

The formation of bilirubin, the mother substance of them all, was formerly attributed exclusively to the liver. The newer physiology assigns that function dominantly to other organs. Its derivation from red cells only is now also questioned.

Macleod, reviewing the work of Whipple, Hoover et al., suggests, on good grounds, that bile pigments may be manufactured de novo out of other materials.

Since it is definitely proved that bilirubin is formed by the reticulo-endotheial system, highly specialized cells, located mostly in the spleen and liver, in smaller measure, in the lungs, bone marrow, lymph glands, and interstitial cells of the testes;—and since the human liver contains relatively few of these cells—the peculiar stellate cells of Kupffer—it is highly probable that in man the most extensive destruction of red cells occurs in the spleen, and that most of the bilirubin, preformed there, passes through the liver cells into the biliary capillaries. But, it must be emphasized, even the bilirubin, not manufactured directly by the Kupffer cells, is somehow chemically altered while passing through the hepatic cells. On this depends the distinction between the direct and indirect van den Bergh reaction.

Clinically, bile pigments are of grave concern in jaundice and in their excretion in the urine.

Bile pressure is normally less than 15 m. m. Hg., which accounts for obstructive jaundice without finding actual obstruction at autopsy. Increased viscosity may not only dam back the bile in the capillaries, but even in the common duct, inflammatory swelling of mucous membranes of the ducts often aggravating the condition.

Stagnation of bile, or greatly diminished bile formation with thickening of it, due to starvation, fasting, or a very low protein and fat but high carbohydrate diet may cause jaundice because less bile is demanded in intestines.

Granted that histologists have made out fine canaliculi, leading from the sinusoids into the hepatic cells, it is explicable how bile could easily go through these into the lymph spaces about the *blood* capillaries, rather than by the normal route through the caniliculi, leading from the liver cells into the *bile* capillaries.

Impeding of bile flow and consequent pronounced viscidity is occasioned, as in pleurisy e. g., by interfered diaphragmatic move-

ment, no mean factor in pressing bile out of the hepatic vessels.

On physiologico-anatomic grounds a simple classification of jaundice can be made:—

1. Obstructive jaundice—obstruction in or beyond the liver, in which bilirubin has gone through the liver cells, and a direct van den Bergh is secured. The obstructive factor may be a stone in duct, plugs of inflammatory mucus, lesions from acute yellow atrophy or necrosis, in which latter cases bile, what of it is still formed, cannot get into the bile capillaries.

2. Toxic or infective jaundice—the liver damaged any degree from cloudy swelling up to actual necrosis. The bilirubin, formed in spleen and elsewhere, does not pass through hepatic cells and gives an indirect van den Bergh.

3. Hemolytic jaundice—excessive destruction of reds, as in acholuria. therefore much increased formation of bilirubin, especially in the spleen, in which event the hepatic cells are overloaded and bilirubin heaps up in the blood. Indirect van den Bergh results.

It is of interest that in pernicious anemia some infective agent sets free some hemolytic toxin and there ensues a low grade jaundice of this third type.

That combinations of these types, yielding biphasic tests, occur goes without saying.

One of the newer findings concerns the pronounced adsorptive power of plasma for bilirubin, holding it so tenaciously that little or nothing is given up to the tissues and so no staining occurs. The renal threshold for bilirubin is very high, cholemia always preceding choluria, the value of bilirubin in choluria being 150% of that in cholemia.

Meulengracht's test, differentiates, on this basis, early and mild stages of jaundice. Moreover the percentage concentration of biliary pigment in the plasma may be used as a discriminating test between obstructive and hemolytic jaundice. In the former type biliuria follows whenever the concentration of bilirubin equals 0.002% whereas in the hemolytic variety the concentration rises to 0.008%—, over four times as high.

Cholesterol, the metabolism of which is controlled by the adrenal cortex, is both secreted and excreted by the liver. Some of it is eliminated, but most of it is held in solution by the cholic portion of bilesalts, and is reabsorbed—just why is obscure, the endogenous source (the envelopes of red cells e. g.) and the exogenous (fatty foods) being plentiful. Combining with cholic acid it may prevent the destructive hemolytic and lipolytic effects of that acid in the body, distinctly a defensive mechanism. The cholesterol content of blood is low in infections and rises with recovery.

Ultra violet rays can convert cholesterol into a very efficient antirachitic substance, relating it therefore to vitamin D, and probably A.

Just before menstruation blood cholesterol increases. Bile cholesterol is low during pregnancy, especially in the last four months. In diabetes the rise in blood cholesterol runs parallel to the severity of the case.

Urea, elaborated exclusively by the liver, and uric acid destruction, are well known functions and need no elaboration here, except to observe that, even in extensive kidney damage, urea retention in the blood is not significant, it being a practically harmless substance.

The Gallbladder

The gallbladder's most important function is to concentrate bile to 1/5 or 1/10 of its original volume and store it till recurrent digestive processes reflexly stimulate its contraction for emptying it into the duodenum. The acide chyme initiates the elimination of secretin from duodenal wall into the blood, the secretin then starts pancreatic and bile flow.

Clinically, drainage of gallbladder is of debated, we may say debatable, value. Recently, with the help of Dr. Andrews, who has had a rather extensive experience in his New York practice along this line and who is an ardent desciple of Lyon, I drained a patient for several weeks, reviewed a voluminous literature on the subject and I feel that, in selected cases, drainage by the Lyon method has indisputable value.

3. The liver as a *storage plant.*

That the liver stores carbohydrates in the form of glycogen has long been known. It is only in the last few years that proteins and fats, also chemically altered, and many inorganic cells are known to be held there as a

reserve for body needs—the fat content being low when glycogen is abundant and obversely.

Being the most active as well as the largest metabolic organ in the body, the amount of blood present in the liver is correspondingly much, and, on occasion, in severe hemorrhage, e. g., the liver can supply temporarily, to tide over such a crisis, a goodly quantity of blood to restore blood volume for bringing blood pressure towards the normal.

4. The liver as a *chemical laboratory.*

The variety of functions the liver subserves is little less than amazing. As a metabolic chemist it is without a peer in the body economy.

The foremost is its familiar glycogenic function.

In this connection it is well to emphasize that the liver cannot with equal facility transform every variety of monosaccharide brought to it by the portal vein.

While the muscles seem to enjoy glycogenetic and glycogenolytic power for dextrose and galactose, equal to that of the liver, the liver is far superior to the muscles in converting levulose—hence the introduction of the levulose liver test—really of little diagnostic value.

In addition to the basic metabolism of the liver cells of all foodstuffs for their own use, and storing them for use of all the other organs, chemical action on proteins is exceedingly interesting.

The liver cells are very sensitive to the amino acid content of the blood. Whenever the concentration of circulating amino acids rises above the "dialysis threshold," which is very constantly around 5 mg. per 100 ml. of blood, the hepatic cells promptly seize upon and deaminize them.

At about the same time amino acids begin to be eliminated in the urine. The body is therefore protected twofoldly from amino acid acidosis. Rarely, however, due to the efficient action of the liver, are amino found in the urine, which would be a wholly wasteful process.

Deaminization would likewise be a wasteful activity were it not that the non-nitrogenous residues (after the amino radicles are split off to form ammonia, which in turn goes to form urea or ammonia salts) are chemically transformed into carbohydrates or fats—only 3 of the 18 amino acids being immediately and directly oxidized, valine, lysine and tryptophane.

In diabetics the simple amino acids "follow the line of sugar metabolism" and are found in the urine as dextrose; the aromatic acids "go the way of fat metabolism" and form ketone bodies.

While not directly germane to this paper, it may be of interest to state that in a diabetic diet all the carbohydrates, 60% of the proteins, and 10% of the fat content ingested are equivalent to sugar.

In the diabetic, too, the fact, that 4 of the amino acids—leucine phenyalanine, histidine, and tyrosine—in the deaminizing process yield aceto-acetic acid, is very significant, because coma is to be attributed largely to the accumulation of that poisonous acid in diabetic blood.

That deaminization makes for excessive protein consumption is of economic import.

While amino acids are absorbed from the digestive tract, storage proteins tend to be formed; but the rapid flooding of the portal circulation does not give sufficient time to lay up a reserve of protein in all the cells of the body, and more particularly in the more efficient store houses—the muscles, the liver, and the spleen. Hence this temporary excess together with the surplus from overeating, our common and uneconomic failing, throws an additional load on the liver and overworks its deaminizing and protein-into-sugar-converting functions.

And since protein foodstuff is so expensive it would be economic wisdom to eat five small meals rather than three heavy meals a day to avoid periodic high tide of blood protein, and conversion of it into the cheaper sugars, and, of course, even wiser to bring our total protein consumption considerably down.

The *metabolism of fat* in the liver is a constant function. After chemically changing the portal and depot fats, it stores them for tissue needs. 60-70% of the dried liver is fatty acid. The increase in iodine value in the changes fat undergoes in the liver indicates that the liver desaturates fatty acid by introducing double linkages into the molecule, which serve

in the chain as weak joints, where the fat may be more readily broken down.

The liver also builds fatty acids into *lecithin*, for which desaturation is the initiating stage. The lecithin, thus formed, is widely distributed in the body cells, especially in nervous tissue, adrenal cortex, and ovary. Lecithin may have a significant share in tissue oxidations.

The *detoxicating power* of the liver is marked. Its extensive enzymic processes easily lead to the warrantable inference that the liver itself is in dire need of—and takes a very prominent part in detoxications.

Hewlett says the liver both sensitizes the body to—and produces anaphylaxis because of its enzymic activity.

Even urea formation—converting a harmful into an innocuous substance—is, at bottom, detoxication, and it is suggested that urea and uric acid may serve as chemical detoxicants.

Alkaloid poisons are rendered harmless by the bilesalts.

By storing certain poisons (such as mercury)—by actively destroying bacteria and chemically changing putrefactive substances (for instance indol, skatol, etc.), absorbed from intestines—by excreting toxic material in the bile—the liver very effectively functions to protect the body against poisoning.

It is well to emphasize here that auto-intoxication from absorption of intestinal putrefaction is much over-drawn, especially in constipation.

Persons of phlegmatic type may go for weeks and months without rectal evacuation and be apparently normal, eat heartily, work and sleep well.

There is an authentic case on record of a man who had no defecation from June 18, 1900 to June 21, 1901, and, all the while, was to all intents and purposes perfectly normal. In the middle of June, 1901, he belched much and complained of some griping, and felt weak. He had lost a little in weight.

When given a colonic enema and cleaned out he was his old, well self again.

The relation of the liver to pernicious anemia is on the public carpet for discussion.

The best and latest findings are to the intent that the toxin of pernicious anemia affects adversely the formation of red cells in the bone marrow, there producing immature reds-megalo-blasts, which are more vulnerable to disintegrating processes than well developed erythrocytes. The toxin, according to Knud Faber (see annal of Clinical Medicine, April, 1926) is due to intestinal protein intoxication, produced, or favored by achylia. He does not say, but I have no doubt, that the liver of the pernicious anemia patient fails to detoxicate this toxin.

Minot noted that, after liver feeding to pernicious anemic patients, there followed a "marked increase in the percent of reticulocytes," and a correspondingly higher red count. He suggests, that the "liver stimulates maturation of the megaloblasts that crowd the bone marrow in pernicious anemia."

Because of the commercialized, highly increased liver consumption today and the unpalatability of a liver diet to the majority of men—it is well to advertise the fact that a non-protein fraction of the liver has been isolated, that is equally if not more effective, and, it is obvious, is given in small quantities.

V. The liver as an electronegative organ. This is referred to in some quarters as one of Crile's "spectatular speculations" and "fool notions."

Read his "Bipolar Theory of Life," or, for lack of time, a readable article in the "Annals of Clinical Medicine," April '26. There is meat in that cocoanut. Already certain effective clinical procedures, in the treatment of liver and gallbladder disturbances, have proven highly efficacious. The nicely articulated activities of brain and liver, in coordinated, purposive effort for the body's well being, are inherent in a delicately poised adjustment of these two electrically charged bipolar organs, the brain being the positive, the liver the negative pole, or, in terms of cell structure and function, the brain, represents the nucleus; the liver the cytoplasm.

Crile discusses pointedly the thermogenic function of the liver, especially the relation of liver temperature to that of the brain, the liver producing 1/3 of the body heat.

In abdominal operations, the anesthetic, hemorrhage (markedly favored by increased

clotting time of blood because of retained bile-salts), mere exposure of viscera to cold, the easy tearing of fibers in the vast and intricate network of sympathetic nerves, etc., led Crile to apply diathermy, which showed a pari passu rise of temperature in liver and brain, and treat the liver, in handling it surgically, with the respect its unipolar importance in bipolar functioning for the body economy deserves.

DISCUSSION

Dr. Paul W. Sanders: The liver was recognized, even by the ancients, as the king of organs, standing as a buffer, on the one hand, between the general circulatory system and the gastro-intestinal tract, and on the other hand between the general circulation and the spleen which filters from the blood micro-organism and toxins that it is unable to destroy, sending them to the liver through the portal circulation for destruction and detoxication.

The hepatic cell has an unrivalled capacity to act on portal blood which has already lost its oxygen. The blood on which the liver acts is venous and leaves the liver as venous blood through the hepatic veins; oxygen plays little if any part in the changes which take place. Physiologists point out that the hepatic artery furnishes oxygen to the liver, and this would appear to be true so far as the liver tissue is concerned, but the supply is not sufficient to lead us to believe that oxygen is necessary for the function.

Perhaps one of the functions of the spleen is the removal of oxygen from the blood which enters the liver by this route. As Dr. van de Erve has mentioned, the main functions of the liver are as follows: (1) The metabolism of carbohydrates; (2) the metabolism of proteins; (3) the metabolism of fat; () the production of bile and (5) the defense against bacteria, protozoa and toxic chemical substances.

Our knowledge of the function of the liver is very imperfect. We have learned a lot from experimentation and one of the most valuable means for attempting to determine the function of an organ is to study the effects of its removal.

Mann and Magath have succeeded in maintaining life in dogs for a period of from thirty-six to forty hours after removal of the liver. In such animals hypo-glycemia develops, associated with convulsions, and death unless the blood sugar level is maintained by the administration of glucose. This work is significant in relation to hypo-glycemia in general and suggests the use of glucose in forms of toxemia associated with hepatic insufficiency. In a dehepatized animal deamidization is remarkedly disturbed and the nitrogen and urea of the blood deminished simultaneously.

On the other hand, uric acid accumulated in the blood. There is also retention of serum bilirubin with an indirect van den Bergh reaction and the development of jaundice. Although these findings are of great scientific interests, the clinical application of the nitrogen is not clear since the extensive study of disease of the liver in the wards almost invariably fails to reveal significant changes in the nitrogen partition of either the blood or urine.

The liver is the source of a substance which promises to become important in clinical medicine namely, heparin. Heparin was isolated by Howell, and is an anti-prothrombin which renders the blood temporarily incoagulable, and bids fair to replace many other substances now used for its purpose.

The clinical laboratory and laboratory methods are developing in increasing importance as aids in the diagnosis and treatment of diseases. Among the newer acquisitions of the clinical laboratory are the so called functional tests, and their importance has grown so that they occupy no small part of the time of the average clinical laboratory. In a measure this condition is a triumph for physiology, because it implies that the clinician has finally recognized that this least appreciated of the science of medicine represents a standard which he can well afford to use. It also implies that at least in many instances the pathologic condition is but a deviation from normal.

Functional tests are concerned practically with the excretory function of the organ. Owing to various physiological activities a large number of tests have been devised as clinical indices to functional changes in the organs. Many of them have been discarded as of little, if any, value. Based on combined clinical study, the van den Bergh test (direct and indirect reaction); the icterus index and the dye test of Rosenthal have been found of major importance. They have at least served to stimulate a healthy interest in problems concerned with diseases of the liver and have made us realize our shortcomings in this field.

EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M. D., F. A. C. S., CHARLESTON, S. C.

THE LARYNGOSCOPE, JANUARY, 1929 THE ETIOLOGY AND THE ETIOLOGICAL TREATMENT OF "PLAUT VINCENT'S ANGINA."

Dr. P. Mangabeira-Albernaz, Campinas, Brazil

Plaut Vincent's angina is by no means a separate disease as it has heretofore been considered. It is nothing but the pharyngeal localization, usually in the tonsils, of fusospirochetosis, a disease caused by the association of the fusiform bacillus of Le Dantec with a spirochete, generally designated by Vincent's spirocheta.

Although Plaut Vincent's fusopirocheta hypothesis dates back to 1894-96, it is, however, true that up to the present the specifically morbid character of the symbiosis has been called in question, or denied. Since I propose to study the etiological therapeutics of this affection in its pharyngeal localization, I must pass to a sketch of its etiology.

Ever since the beginning of research to determine the casual factor of ulceromembranous angina, disagreement amongst authorities has been evident with regard to which of the two germs is to be considered the primary agent.

Let us admit, for example, that the cause of a given affection lies in the combination of two different germs. Let us grant further that neither of these germs alone is capable of producing any sort of lesion, and that only the two in combination can bring about a morbid condition.

The theory of the spirochete origin of angina, as of the other forms of the disease, was strongly reinforced by the researches upon the pathological anatomy of the lesions.

The authorities cited have verified in all these cases, so far as concerns the microrganic field, that there are two layers in the lesions: one (superficial) a zone of necrosis, the other (deep zone) of inflammatory reaction. The necrosis zone included three layers:

1. Superficial, consisting of various microbe forms.

2. Median, consisting of true necrosis, preempted exclusively by the germs of the symbiosis.

3. Innermost (or deepest zone of the necrotic layer) actively productive of bacilli (Vincent's layer of active bacterial production) characterized by the presence of fusiform bacilli in considerable numbers, and of occasional spirochetes. The deeper zone of inflammatory reaction has no fusiform, and no pus-producing germs, but, as Veszpremi had already discovered, it bears great quantities of sprichetes. The spirochetes are found throughout almost the whole thickness of this zone or layer. They abound around the vessels and the small centres of interstitial hemorrhage, where they constitute a veritable tangle and, as it were, open the way for the latter.

From what has been said we conclude:

1. That the fusospirochete combination is the cause of ulceromembranous angina.

2. That the morbid character of the affection is not due to the spirochete alone, although the study of the pathological anatomy and of the therapeutics of the disease would lead one so to suppose.

3. That the disease is produced by the two germs, neither alone being pathogenic. The fusiform bacillus of Le Dantec, Seitz' bacillus hastilis, is a well defined germ bacteriologically.

From the morphological point of view, it seems that the type of spirochete found in symbiosis with the fusiform bacillus is always the same, wherever that type may be. Since we cannot classify the nonsanguinary spirochetes, we may call it the Vincent's spirocheta.

Proper therapeutical procedure in Plaut Vincent's angina has not usually been observed. If, as we have seen the fusospirochetosis is due to the joint action of the fusiform bacillus and

Vincent's spirocheta; if, as the studies in pathological anatomy demonstrate, the spirochete penetrate deeply into the tissues; if, in order to reach it, it becomes necessary to dissolve the magma underlying the lesions, the pathognomonic symptoms of the disease, then it is clear that the remedy to be used should fulfill very special conditions.

These conditions may be summarized in the following five requisites:

1. The remedy employed should be absorbed to a greater or lesser extent by the tissue; that is, it should penetrate in order that its action be felt upon the deeper tissues and on the surface.

2. It should be antiseptically active for an appreciable time. This means that the remedy should not be immediately resolved by contact with the tissues, as happens, for example, with hydrogen peroxide, perborate of sodium, etc.

3. It should be neither caustic nor destructive. These qualities unfortunately are often and unwisely made use of in the treatment of disease. If, however, we destroy the tissue, we increase and enrich the field for the multiplication of germs; for unless the cuterization be very extensive, the germs present, not only on the surface, but in the deep tissues, will not be reached. Such thorough caustic action is not always practical.

4. It should have a dissolvent action upon the necrotic tissue characteristic of the lesion.

5. Its antiseptic action should be specific upon one or other component of the symbiosis, for if one of these is eliminated the symbiosis is destroyed. The antiseptics directly acting upon anerobic bacilli (of which the fusiform bacillus is a variety)are the oxidizing agents, and their value has not been thoroughly proven on the living subject; for it is rare to find an anerobic germ which cannot live as erobic. The same is not the case with regard to the spirocheticidal agents, the antiseptic action of which is more specific than any other known in therapeutics.

If we study the therapeutics in vogue in the so-called ulceromembranous angina, we shall see how far specialists have come from satisfying the above-mentioned conditions. This perhaps is the reason why Plaut Vincent's angina has called forth by itself a greater diversity in treatment than all other infections of the pharynx, put together. It is evident that in mild cases "any antiseptic will do," as Escat says; but, unfortunately, the specialist does not always meet simple cases. Hence arose the practice of violent therapeutics with the salvarsan administered intravenously, a treatment which at the present, should only be resorted to in the most exceptional cases.

Returning to the critical examination of the different methods of treatment in vogue to cure Plut Vincent's angina, let us see which meet the above specified conditions. The following substances meet the first condition, that is, they penetrate more or less deeply!

Slight penetrating power; 1. tincture of iodin in paints (Vincent); menthylene blue, strong solutions (Lermoyez); 3. trypafalvine (Erick Mayer, Mann, Kall, Markus Mayer); 4. silver nitrate of methylene blue, or angrochrome (R. Fischer, Kronenberg); 5. pyoctanine, or methyl-violet (Kronenberg, Wichels); 6. mixture of trypaflavine with the gentian violet, or acriviolet (Herzig).

Still weaker penetrating power. 1. chromic acid (Dubreuilh); 2. picric acid (Prill).

Strong penetrating power: 1. salvarsan and neosalvarsan, employed generally or locally; 2. the salts of bismuth locally applied. Its penetrating power is not equalled by any of the other substances used in the treatment of Plaut Vincent's angina.

Brief antiseptic action;—a long list but of little value.

More prolonged action; 1. the coloring substances: methylene blue, fucosine, gentian violet methyl violet, trypaflavine, rivanol, gentian violet being the most active of these.

More powerful action: 1. the arsenobenzols, particularly neosalvarsan and silversalvarsan; 2. salts of bismuth, of still greater power. Its action, as I was able to verify by its analgesic properties, which it also possesses, lasts from two to four hours after application.

The third condition—no caustic or destructive action—is met by all the substances previously studied, except acids and astringents. Neosalvarsan is very painful when applied, but does not destroy tissue. Bismuth salts also bring about some burning, which is much more tolerable than that produced by neosalvarsan,

neither are they destructive.

The fourth condition—a dissolving action on the necrotic layer—is met, I believe, only by Bismuth.

The fifth requisite—the substance should have a relatively specific antiseptic action upon one of the compounds of the symbiosis—is not met except by few of the therapeutical agents. The following may be considered more or less specific for a fusiform bacillus, as also for the anerobic bacilli in general. (The remedies mentioned have not proved effective) 1. hydrogen peroxid, 3 per cent, and perhydrol; 2. powdered sodium perborate; 3. potassium permanganate; 4. chromic acid; 5. chlorate of calcium.

The ones that are effective on the spirochetes are the arsenobenzols and the bismuth substances. The majority of the authorities consider the best treatment of Plaut Vincent's angina to be the use of neosalvarsan. The only difference of opinion is with the method of use; some regard the effect of the local application superior to the intravenous, others consider the intravenous as the more efficacious. In this particular I am of the opinion of Beck and Kerl: "that the intravenous application should be resorted to only in very severe cases, or in those which are frequently recurrent."

The arsenobenzols entered into the therapeutics of ulceromembranous angina in 1907. Arsenobenzol was then employed intravenously and this method soon became general. It was not till 1911 that Achard and Flandrin, and 1912 that Caesar Hirsch thought of calling into play the aquous and glycerinated solutions, the pure substances powdered, applied upon the lesions, which naturally displaced the dominant intravenous method.

The employment of bismuth in local applications in ulceromembranous angina, and in all spirochete affections, pure or compound, was justified, from the results of experiments by various doctors. This is the reason why I began my experiments on Plaut Vincent's angina making careful paints with potassium and sodium bismuth tartrate, at 10 per cent.

Few of the bismuth salts have been employed in this treatment. The first used was acid potassium bismuth tartrate in oil emulsions at 10 per cent (the bismulol of trade) Afterwards I used the potassium and sodium bismuth tartrate (trepol) in emulsions at 30 per cent. Le Goff tried the oxid of bismuth (neotrepol) at 3 per cent. The iodin bismuthate of quinin (quinby and bismugalol) has been tried, and recently Laurens employes with relatively poor results the subnitrate of bismuth. It seems that the effect of the salt is in direct ration with the percentage of metallic bismuth. It is my opinion, however, that if the bismuth tartrate at 30 per cent causes overwhelming therapeutical results, it is not necessary to use larger doses of bismuth. The absorption of the metal by the ulcer is a recognized fact and the poisoning of the organism—though so far unobserved—is quite possible.

The treatment I employ consists in a daily paint of the ulcer with a salve emulsion of bismuth tartrate at 30 per cent—trepol; gargling with any mild antiseptic every two or every three hours. The severe cases call for three treatments at most.Le Goff carried on the treatment as long as eight days, but without continuous attendance on the patients. One should remember, as Beck and Kerl say, "that the affection lasts, when treated with the usual antiseptics, 14 to 21 days."

Bismuth should substitute neosalvarsan in the treatment of Plaut Vincent's angina. This seems a rather bold assertion, but the study of innumerable other localizations of spirochetosis upholds me in it. I employed bismuth with the best results in three cases of fusospirochete otitis; in 64 cases of phagedenic ulcer (ulcus tropicum); in three phagedenic genital cases accompanied with widespread destruction of the foreskin and gland, and in two cases of erosive balanitis of Berdal and Bataille. One may say that this simply proves the positive effects of bismuth; but in some of the above cases (phagedenic ulcer), neosalvarsan applied locally and generally proved itself in several trials inferior to the bismuth. In one case the intravenous use of neosalvarsan had no effect on the lesion. In another case, two identical lesions treated locally, the one with this drug, the other with bismuth, healed at different times, bismuth proving to be unquestionably superior.

The economic factor is also worthy of attention. The local neosalvarsan application is usually in solution of 3 per cent. Since this

deteriorates on prolonged exposure to the air, it becomes necessary to use fresh solutions. On an average of three applications, the treatment costs about $3.50 while the same results are obtained with 2. gm. of bismuth, or about 25 cents, at present exchange.

The local application of neosalvarsan is very painful; that of bismuth, as spoken of by some hypersensitive patients, is simply stinging, while for the majority it is painless.

The principal advantage which bismuth presents over neosalvarsan is, notwithstanding, its effect against pain. As is known, the principal characteristics of fusospirochetosis are: pain, false membranous ulcer and bad ordor.

This sedative property of bismuth deserves to be more widely employed in our special department. I was able by the use of 20 per cent bismuth paints to allay for periods of four hours the most violent pains of a patient suffering from endothermic coagulation of the tonsils.

Summing up, we may say:

1. Plaut Vincent's angina is a pharyngeal localization of fusospirochetosis.

2. This disease is produced by the association of the fusiform bacillus of Le Dantec with a spirocheta which may be called Vincent's, in default of an exact microbiological classification.

3. The etilogical treatment of the disease calls for five conditions to be met by the remedy, which are strictly present in high degree in only two series of substances: the bismuth substances and the arsenobenzols.

4. Bismuth has many advantages over the latter; it is less toxic ,more powerful, and economical, and is immediately and certainly sedative, allaying the characteristic pain.

5. The bismuthic substances locally employed are, therefore, the best treatment of Plaut Vincent's angina.

WOMAN'S AUXILIARY
South Carolina Medical Association

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Mrs. W. A. Able, Columbia, S. C. ---- First Vice President
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Mrs. E. M. Hicks, Florence, S. C. ------- -- Sixth District
Mrs. Carl B. Epps, Sumter, S. C. ------ -- Seventh District
Mrs. L. A. Hartzog, Olar, S. C. ---------- Eighth District

The local Auxiliaries are anticipating the annual meeting of the State Auxiliary with genuine pleasure.

Charleston is an ideal place for the gathering and it is hoped a large delegation of doctors wives from all over the state will be present to make this the very best meeting in the history of the organization.

Our state President, Mrs. W. H. Nardin, who is visiting in Charleston just now, will confer with the Charleston ladies as to plants, etc., and will be able to give definite information about the program in the April Journal.

BULLETIN OF WOMAN'S AUXILIARY TO THE SOUTHERN MEDICAL ASSOCIATION. HISTORICAL COLLECTIONS

The collection of historical facts concerning the medical profession is one real service we may give to our county and state medical associations. The medical associations in several of the northern state have already complied, published histories of their pioneers in medicine. It is the desire of each state association to have the record of its progress in medical practice in permanent form. Since the physicians, themselves, are in most instances too busy to collect this data, what a splendid opportunity is here afforded the members of the Auxiliary!

The types of material advisable to collect are numerous and varied; old books, papers, magazines, and pictures of every description—woodcuts, daguerreotypes, tin-types, oil paintings, sketches, water colors, prints, and photographs, instruments, instrument cases, etc.

Methods of securing this material will largely depend upon its location. Some will be found in old libraries, in the garrets of some old Southern homes, deep in the recesses of some dusty bookcase in some aged doctor's office; in the county court records, old city directories, church or parish records, ancient tombstones in the forgotten cemeteries. Also, many stories of praiseworthy acts of the old family physician as yet unwritten may be secured from the oldest inhabitants, if the seeker of medical facts will take the time to secure the stories.

Through organization we will perhaps be better able to gather more complete data.

May I suggest that the State and County President appoint a chairman of historical collections, with each member of the auxiliary considering herself a member of this historical committee for her county? All of the historical data secured should be placed in the hands of the county chairman. The county chairman would send this material, accompanied by a list giving the names of the articles secured, together with the donor's name, to the state chairman, who would forward this to the secretary of the state medical association, where all of this precious material could be kept in a safety vault. Then, at its pleasure, the state medical association can have this data compiled by an historian of its own selection, and published as it pleases.

Mrs. J. W. Sams.

SOCIETY REPORTS

REGULAR MONTHLY MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY, HELD AT THE IMPERIAL HOTEL, MONDAY, FEBRUARY 4, 1929.

The meeting was called to order by the President, Dr. Murray at 8:10 P. M., with about 50 members present.

The guests of honor present were Drs. R. E. Hughes, President of State Medical Association; L. G. Beall, and C. Fred Williams.

Dr. Hugh Smith suggested that reports of clinical cases be dispensed with that our out of town speakers might have more time for the presentation of their papers. This suggestion met with the approval of the Society.

The President then introduced Dr. L. G. Beall, of Black Mountain, N. C., who read an excellent paper on "Some Considerations of Mental Diseases in Middle and Old Age". Dr. Beall first stated that much attention had been paid to communicable and other diseases but little or no attention had been given mental diseases. Our aim should be to foster good physical health with the mental and to change bad habits and bad environments. In an analysis of 500 cases of mental disease Dr. Beall stated, there were 189 of these patients below 40 years of age and 311 of 40 years. He mentioned that manic depressive psychosis, dementia praecox, and thyroid disease were the principal types occurring in those patients below middle age. Dr. Beall stressed the importance of studying the individual rather than the population, and that early cases of mental disease should be sought out for it is then that patients are most amenable to treatment.

The numbers of cases of mental disease are steadily increasing. There are seventy-five thousand new cases of mental disease admitted to American hospitals each year. The overcrowding of these hospitals is most distressing; from 1-8 to 1-6 of each state's appropriations goes for the maintenance of these institutions.

Dr. Beall then summarized his paper by stating that organic mental diseases are those that are caused from infections; that heredity as well as environment are important factors; and, that efforts are being made to salvage through the juvenile courts of the country.

Dr. Murray then called upon Dr. C. Fred Williams, Superintendent of the South Carolina State Hospital, who gave a most informing paper on "Criminology from the Standpoint of Psychiatry". He stated that the physician of today makes an effort to elevate the criminal, and that mental disease often creates a tendency to crime, which, if taken in hand early enough may be corrected through proper therapy. Dr. Williams stated that a hasty examination of a prisoner by court order is most unsatisfactory because the human organism is a most complex one requiring a good deal of time and effort for proper study.

Heredity as a cause of crime alone is a great fallacy as there is apparently no proof that it is. According to Healey and Spalding, alcoholism affects the environment but is not in any sense of the word hereditary. A disturbed mental condition in a child is very often corrected by the death of one or both parents, depending, of course upon the responsible parent; even the change of environment is sufficient to correct a serious mental defect. Dr. Williams then added that there is nothing at all to the heredity of a patient—it is all environment provided that children are normal mentally and physically. Jealousy, of itself very often leads to crime. One thousand cases of wrong-doers were then mentioned and of this number 72 per cent were normal mentally.

The environment factor is the all-important one. Dark, dingy living quarters and wretched homes are predisposing factors to melancholia, and the setting of bad examples leads to disaster in later life. The proper social adjustment requires a lot of patience and sympathy. Young life needs an outlet and not repression. Energetic young life should be corrected and led into good channels rather than subjected to punishment. Many base criminals could have been helped if early tendencies had been corrected properly.

The scientific program was here completed. The question of raising the dues of the Society was then brought up. Dr. W. T. Brockman moved that the dues be raised to $10.00 a year; seconded and lost.

Dr. Anderson discussed increased license fees in the City of Greenville and moved that the chair appoint a committee to go before the Finance Committee of City Council; seconded and carried.

The name of Dr. Gerald E. McDaniel was then submitted for election to membership in the County Society. It was moved, seconded and unanimously carried that Dr. McDaniel be elected to membership.

Dr. Murray appointed Drs. Bruce, Houston and Anderson as the Committee to consult with the Finance Committee of City Council in regards to license fees.

Dr. Wolfe moved that the Tri-State Medical Association be invited to hold its 1930 meeting in Greenville; seconded and carried.

There being no further business the meeting adjourned.

I. S. Barksdale, M. D., Secretary.

LAURENS COUNTY MEDICAL SOCIETY MEETS

The Laurens County Medical Society held its February meeting in Laurens on February 25.

Dr. R. E. Hughes, the new President presided. The attendance was good and this meeting proved to be the best held by the Society in a long time.

Dr. W. T. Pace, of Gray Court, read a most interesting paper, together with case reports on "Amebic Dysentery".

Dr. J. Y. O. Daniel read a very excellent paper on "Syphilis of the Liver". He reported a case having occurred in his practice.

Dr. F. K. Shealy read a paper on "Broncho Pneumonia". This was discussed by all members present.

Drs. J. W. Davis and Chas. N. Wyatt were elected delegates to the State meeting in Charleston, with Drs. W. D. Ferguson and J. M. Bearden as alternates.

J. L. Fennel, M. D., Secretary.

ANDERSON COUNTY MEDICAL SOCIETY

The Anderson County Medical Society held its regular February meeting at the John C. Calhoun Hotel, Anderson, S. C., February 14, 1929, at 12 noon. The meeting was presided over by the President, Dr. J. N. Land.

We had as our guests, Dr. E. A. Hines, from Seneca, S. C., Secretary of the South Carolina Medical Association; Drs. R. M. Pollitzer and L. O. Mauldin, of Greenville, S. C.

Dr. Hines gave a discourse on "Undulant Fever" and gave a report of the cases that have so far appeared in South Carolina. He is making a detailed study of the prevalence of this disease in the state.

Dr. R. M. Pollitzer gave a very interesting talk on "Serum sickness," clearly differentiating serum sickness from serum accidents (anaphylaxis).

Dr. L. O. Mauldin entered into the discussion of the subjects presented. Much interest was shown in both the subjects which were freely discussed by all the members present.

The secretary was instructed to thank the Anderson County Delegation for increasing the appropriation to the Anderson County Hospital for the care of charity cases.

At the conclusion of the scientific program the regular monthly luncheon was served.

Members present, 31.

Visitors, 3.

E. E. Epting, M. D., Secretary.

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL, TUESDAY EVENING, FEBRUARY 12, 1929, AT 8:30 O'CLOCK.

The meeting was called to order by the President, Dr. Henry P. Jackson.

Present: Doctors: Allen, A. E. Baker, B. R. Baker, Ball, Banov, Beach, Bowers, Buist, Burn, Cain, Cannon, Cathcart, Chamberlain, Finger, Heidt, Jackson, F. B. Johnson, Kollock, McCrady, McInnes, Maguire, Martin, Mitchell, Mood, Moore, Pearlstine, Phillips, F. R. Price, Prioleau; Ravenel, Rhame, R. B. Rhett, W. M. Rhett, Richards, Rutledge, Scharlock, Scott, S. Simons, W. A. Smith, Taft, Townsend, Van de Erve, Wild, I. R. Wilson, R. Wilson, Miles. (46).

Guests: Dr. R. S. Dinsmore, of Cleveland; Drs. A. R. and J. B. Johnston, of St. George; Dr. Roe E. Remington, of the Medical College, and Dr. J. P. Palmer, of Charleston.

The minutes of the meeting of January 22nd were read and confirmed.

The Secretary read a letter from Dr. J. N. Walsh requesting transfer of his membership to the Berkeley County Medical Society, effective January 1, 1929. Dr. Walsh enclosed a check to cover his unpaid dues. It was moved, seconded and carried that Dr. J. N. Walsh be granted a transfer to the Berkeley County Medical Society as of January 1, 1929.

The President reported that a reception was held in the Society Hall on the afternoon of January 30, 1929, in honor of Sir Wilfred and Lady Grenfell. He stated that he had appointed a committee composed of the officers of the Society and Dr. Robert Wilson for this occasion. The reception was well attended by a large number of lay people in addition to the members of the medical profession.

Under Miscellaneous Business Dr. R. S. Cathcart, as member of the Library Committee, reported, in the absence of the Chairman, that the Committee desired to recommend that the books recently received from the Surgeon General's office be placed under the care of the Dean of the Medical College of the State of South Carolina for preservation in the college library, until such time as the Society was able to take proper care of them. On motion, duly seconded, this recommendation of the Library Committee was carried.

The President announced that he had appointed the following committee to draw up resolutions

of respect on the death of Dr. G. F. McInnes: Dr. J. F. Townsend, Dr. J. H. Cannon, and Dr. H. W. de Saussure.

The President also announced that Dr. I. R. Wilson had presented to the Society a framed card showing the schedule of fees. He stated that Dr. Wilson had also had enough of these made for distribution to the members of the Society.

At 9.00 P. M. the Scientific Meeting was called.

Under Special Case Reports, Dr. William H. Prioleau presented three cases of hyper thyroidism, which had been successfully operated upon and were improving.

Dr. Robert S. Dinsmore, of Cleveland, was then introduced by Dr. Prioleau, at the request of the President. Dr. Dinsmore gave an able address on Diseases of the Thyroid Gland, and showed lantern slides to illustrate the various types of the disease and the results of treatment. The paper was open to discussion, at the request of Dr. Dinsmore, and the following took part: Drs. Prioleau, Burn, Maguire, and F. R Price, Dr. Dinsmore closing.

There being no further business, the meeting adjourned.

W. Atmar Smith, M. D., Secretary.

CLARENDON COUNTY MEDICAL SOCIETY MEETS

The regular meeting of the Clarendon County Medical Society met at the Offices of Dr. Scott Harvin on March 8th, all the members were very much impressed by these well equipped and commodius offices, at this meeting, the following officers were elected for the insuing year: Dr. Thos. Gunter, President, Dr. C. B. Geiger, Vice President, and delegate to the house of Delegates, meeting at the time of the State Medical Association, in Charleston, Dr. Stukes Secy. & Treas., after this a paper was read by Dr. Carrigan on Acute Lymphatic Leukemia, appearing in a child of only eleven months, the paper being discussed by Dr. T. J. Davis and Dr. W. S. Harvin.

L. C. Stukes, Secy.

RIDGE MEDICAL SOCIETY MEETS

The Ridge Medical Society met the eighteenth of February at seven o'clock in the evening in the Leesville Infirmary.

After the usual opening ceremonies, Dr. William Weston, Jr., read an interesting and instructive paper on nutrition, which the Ladies Auxiliary attended and seemingly enjoyed. In addition to many good things Dr. Weston stressed the importance of milk in the diet of so many who fail to get it.

Drs. Crosson, Wise and Timmerman discussed various features of Dr. Weston's paper.

Dr. W. P. Timmerman exhibited an unusual case of skin grafting and narrated some amusing incidents which elicited not only comment but merriment.

Dr. C. A. Mobley of Orangeburg gave an interesting address on hernia and herniotomy with illustrations, which elicited inquiries and favorable comment.

Drs. D. B. Frontis, Ridge Spring, A. R. Nicholson, Edgefield, and R. H. Timmerman of Batesburg were elected delegates to the State Medical Association.

Dr. A. R. Nicholson was elected president to fill out the unexpired term of Dr. W. T. Gibson who has moved to Bailey, N. C.

An elegant supper was served in the Infirmary dining room by Miss Eulah Hyatt and her assistant nurses.

The Ladies Auxiliary was the guest of the Ridge Medical Society.

Short after dinner speeches were made by Drs. Thackston, Nicholson, Weston, Beeler, Mobley and Crosson also Mrs. W. P. Timmerman and Mrs. E. C. Ridgell.

Dr. W. P. Timmerman read short sketches of Drs. Lewis M. Asbill, J. B. Dubose and St. P. Dubose, and S. Goods Mobley and commented upon some of their outstanding characteristics.

Dr. F. G. Asbill spoke very feeling and laudatorily of the late Dr. W. H. Timmerman as a physician, statesman, business man and citizen. It is the purpose of our Society to have sketches of some of the deceased doctors of our section at various meetings. May we suggest that some other small Societies try it.

Many of our local nurses also met with us. The next meeting is to be in Batesburg at Dr. W. P. Timmerman's.

Drs. D. B. Frontis and W. P. Timmerman attended the meeting of the Tri State Medical Association in Greensboro, N. C.

OCONEE COUNTY MEDICAL SOCIETY MEETS

The Oconee County Medical Society met at Seneca, Friday, January, 18,1929 with Dr. J. W. Bell, President, in the chair. The minutes of the last meeting were read and approved. The following members answered the roll call: Drs. J. W. Bell, B. F. Sloan, T. G. Hall, W. C. Mays, J. S. Stribling, E. C. Doyle, E. A. Hines, W. C. Marett.

Under head of clinical cases Dr. E. A. Hines presented a patient recently recovered from Undulant Fever. The case was discussed freely by several members of the Society. This was the

first case probably ever presented before a South Carolina Medical Society.

Under the head of new business Dr. Hines reported on the County Hospital proposition to the effect that no active work had been done in recent weeks about it.

Election of officers resulted as follows:

Dr. T. G. Hall, President, Westminster, S. C.

Dr. W. C. Marett, Vice President, Seneca, S. C.

Dr. E. A. Hines, Secretary-Treasurer, Seneca, S. C.

Dr. J. S. Stribling, Delegate to State Medical Association meeting, Seneca, S. C., with power to appoint alternate.

Dr. W. C. Mays was elected to Board of Censors for three years to 1932, the term of Dr. J. D. Verner having expired.

The Society then adjourned and met with the Woman's Auxiliary at the home of Dr. and Mrs. J. S. Stribling where delightful refreshments were served and an interesting joint program was carried out.

E. A. Hines, M. D., Secretary.

PITHY SUGGESTIONS

When jealous General X, of the Union Army, told Abraham Lincoln that U. S. Grant, though getting victories, was drinking a great deal of whiskey—you remember Lincoln's laconic reply "General X, **find out** the brand and get some yourself."

Let us learn something of our Colleagues in the State. Their victories and successes. Maybe we can use some of their brand of action.

"Competition is the life of trade"—and old dictum—possibly conceived in the jungles but **Co-operation** is the life of **professional success.**

If we cannot get anything in the line of Technique or Diagnostic acumen from our Colleagues —Maybe we can in diplomacy, culture, and gentility—Few of us are Perfect—from the layman's view point anyway.

Every State meeting is important, but to keep abreast of the times **(now a necessity)** the meeting in Charleston May 7 will be the most important ever held. Questions and issues are coming up materially affecting every medical man in the State, professionally and pecunarily. If you are a member come, if you are not and **Can—JOIN NOW!**

If you are so satisfied outside the State Society with your standing what does the layman think of you. Even the cheapest lawyer has learned to use it against you, when you are called to court. "Pride comes before a fall.' May we never fall, a word to the non-member is a real duty devolving upon us.



SITUATIONS WANTED

WANTED: Salaried Appointments for Class A Physician in all branches of the Medical Profession. Let us put you in touch with the best man for your opening. Our nation-wide connections enable us to give superior service. Aznoe's National Physicians' Exchange, 30 North Michigan. Chicago. Established 1896. Member The Chicago Association of Commerce.

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NEWS ITEMS

Published at Request of Dr. F. B. Johnson, Director Clinical Laboratories Medical College State of S. C.

In accordance with the trend of the times, the practice of medicine is utilizing more and more the services of trained lay help. The advent of the laboratory as an indispensible aid to the diagnosis of disease has created a new specialty in medicine; that of clinical pathology. In order to carry on the numerous technical tests required in scientific diagnostic procedures, the laboratory director has found it necessary to train the technical personnel. With the standardization of hospitals and the urgent call for qualified laboratory assistants there has arisen a demand for proper standardization of the preliminary education and technical training of those enrolled in this new profession.

There has also been a desire on the part of those engaged in this useful calling to raise their status, similar to the evolution of the trained nurse of a generation ago. This want is now being taken care of by a national organization consisting of a body of men who are most vitally interested in elevating the intellectual and technical status of laboratory workers. The American Society of Clinical Pathologists has taken upon itself the task of organizing a Registry of Technicians with rules under which those qualified by education, technical instruction, and moral character will receive a certificate.

The subject is of interest to physicians in every field of endeavor as many of them are desirous of securing the services of technicians to carry on the routine laboratory procedures.

There is no doubt that the elevation of the laboratory technician to the status of a respected and useful calling will be a great help to the medical profession, to the patient, and to the scientific practice of medicine.

The headquarters of the Registry of Technicians of the American Society of Clinical Pathologists are located in the Metropolitan Building of Denver, Colorado.

Another very desirable feature of the Registry is the facilities it offers in finding suitable placement for registrants and in aiding physicians to find desirable applicants.

The American College of Physicians will hold its Thirteenth Annual Clinical Session in Boston, April 8-12. Dr. Charles F. Martin, Dean of the Faculty of Medicine, McGill University, is President of the College this year, and Dr. John H. Musser, Professor of Medicine at Tulane University Medical School is President-Elect and will be inducted to the Presidency toward the end of the Boston meeting. Dr. James H. Means, Jackson Professor of Clinical Medicine at Harvard Medical School and Chief of the Medical Service at the Massachusetts General Hospital is General Chairman of all Boston Committees having charge of arrangements for the Clinical Session of the College in April.

The Program provides hospital visits, clinics, demonstrations and ward-walks during the forenoon at fifteen different Boston hospitals, and for general scientific sessions each afternoon and evening in the Assembly Room of the Hotel Statler, which will be headquarters. Eminent authorities in their special lines will present the results of their work before an audience competent to appreciate the value of the contributions.

A Symposium on Deficiencies will take place the first evening of the Session, and will be of particular interest because of the fact that deficiencies are nowadays assuming a far more wide-spread and important role than had heretofore been anticipated. They have come into their own as factors producing acute and chronic disease on a par perhaps with infections. The Committee has secured for the Program men who can speak with authority on a variety of aspects of this important subject.

Another special feature is a review of the Present Status of Vaccine and Serum Prophylaxis and Therapy, designed to give the Internist a rapid survey of the field. The speaker, Dr. Benjamin White, of Boston, is an authority on these subjects and can give the high spots in rapid and yet forceful fashion.

The annual Banquet of the College will be held Thursday evening, April 11, when Dr. George E. Vincent, President of the Rockefeller Foundation, will deliver the chief address. The Convocation, for the conferring of Fellowships, will take place Friday evening, April 12. Dr. Charles F. Martin, of Montreal, will deliver the Presidential Address.

Programs and details concerning reduced fares, admission, etc., may be secured from the Executive Secretary, E. R. Loveland, 133-135 S. 36th Street, Philadelphia, Pa.

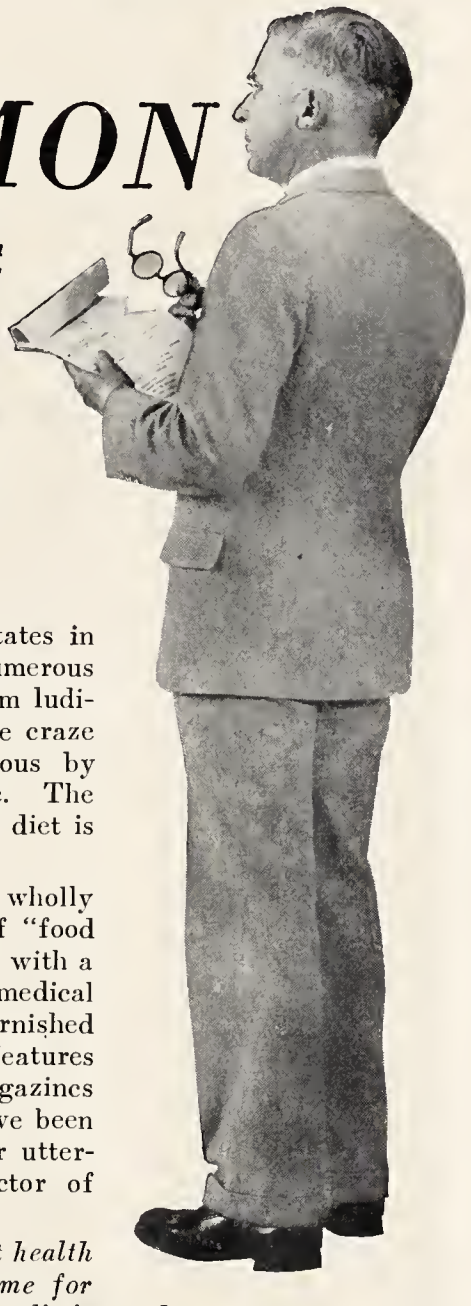
WANTED position as laboratory technician by young woman. Three years' experience: One year's training in Clinical pathology at S. C. Medical College, one year in physician's laboratory, and one year in S. C. State Board of Health Laboratory. Equipped to make usual examinations of clinical laboratory, including serological tests and blood chemistry. Best of references.

"W", care State Hygienic Laboratory
Columbia, S. C.

Correcting dangerous food fads

SUGAR & COMMON SENSE

needed in the diet



Evidences that medical and scientific men are leading a swing toward sanity in diet.

DIETARY opinion in the United States in recent years has been swept by numerous nation-wide food fads, most of them ludicrous, many of them harmful. The craze for slimness, exposed as dangerous by many physicians, is an example. The fad for eliminating sugar from the diet is another.

Diet misinformation cannot be wholly blamed on the public. A swarm of "food extremists," laymen and laywomen, with a smattering of terms gleaned from medical and scientific publications, have furnished an endless supply of articles and features to the newspapers and popular magazines and radio. These "authorities" have been read and heard by millions. Their utterances have had the attention factor of sensational interest.

It is a dangerous policy to entrust health education to lay writers. It is time for medical and scientific authorities to eliminate the dangers of faddism with precepts of intelligence and common sense.

There are evidences that medical and scientific men are leading a swing toward sanity in diet. Twelve medical specialists and dieticians recently prepared a symposium exposing the dangers to men, women and girls of starvation diets and "reduction treatments," so called, for slimness.

"The most delicate parts of the body are always the ones to suffer first," says one of the medical specialists. "Keep children and young people well nourished and up to weight," says another.

Medical directors before an eastern tuberculosis conference recently warned of the dangers of under-dieting of young girls. "The most difficult problem," said one of the directors, "facing us in combating tuberculosis among high-school girls, and particularly among the young flappers of today, is the serious habits they practice to retain or acquire a slim and graceful figure. . . . The problem of nutrition is the one we have to face in our treatment of girls of this age. It is at this age that girls are most susceptible to tuberculosis and other diseases."

A research food biologist, at one of the great universities, recently said: "Sugar is a carrier for roughage in the diet — mineral salts, mineral ash, and fruit vitamins. Sugar modifies the harsh fruit acids and makes the fruits palatable. It does not injure or change in any way the delicate compounds. At least 90% of constipation is due to a lack of roughage. Eat bran, fruits and vegetables sweetened to taste."

The ranking biological chemist at another great university recently said: "Sugar is nature's incomparable flavoring agent. Sugar is one thing that relieves the deadly dullness of our overly refined foods. Also, sugar is wholesome and the most inexpensive condimental food in the world."

Sanity in diet calls for varied roughage foods. In addition to milk and milk products, young people and adults should eat a varied diet of cereals, fresh or canned vegetables and fruits. Sugar makes these healthful foods enjoyable. The Sugar Institute, 129 Front Street, New York, N. Y.

The Journal

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EDITORIAL

PRESIDENT'S CALL TO UNVEILING OF SIMS MEMORIAL

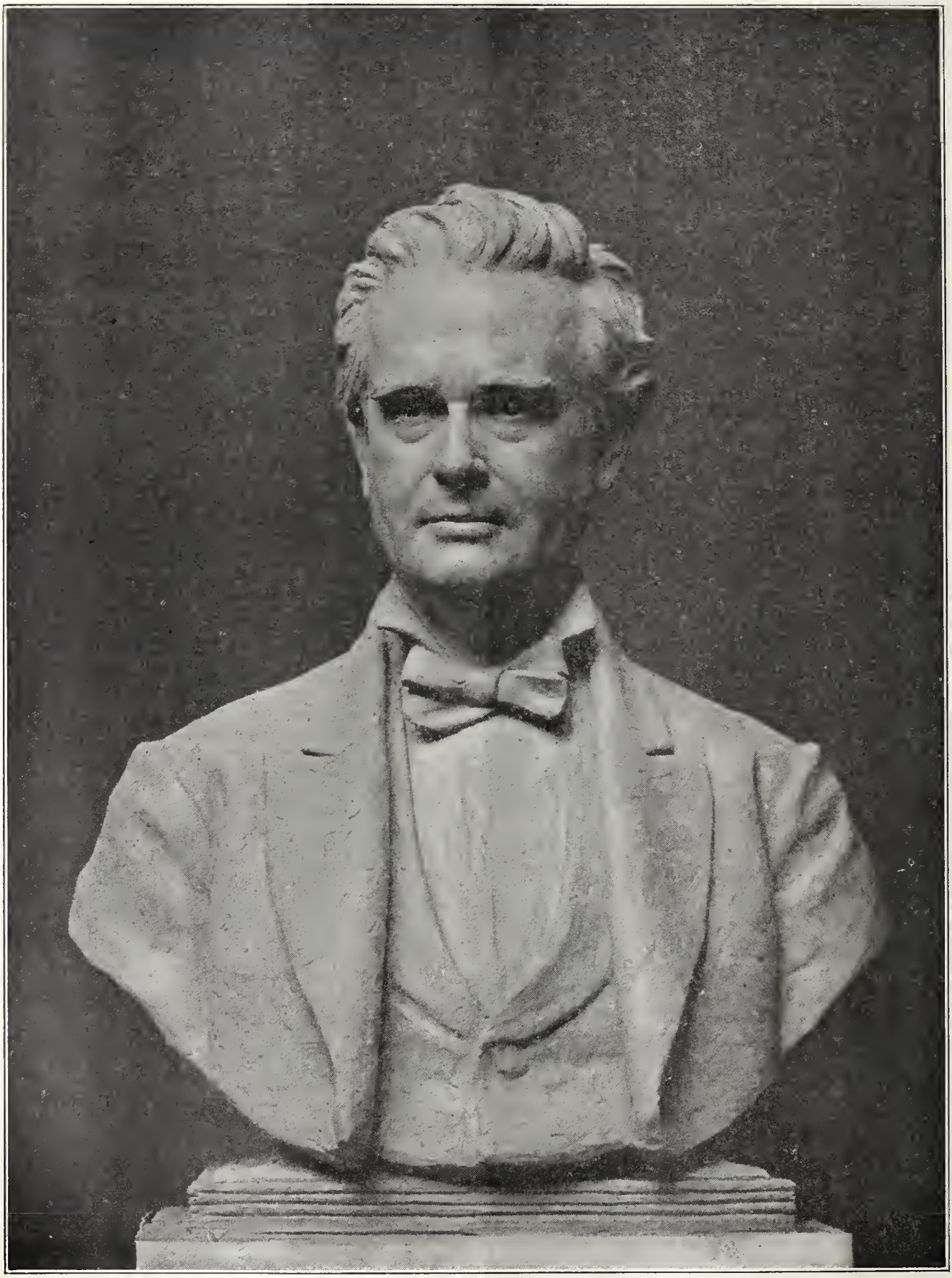
Friday, May 10, 4 P. M., has been selected as the most appropriate time for the unveiling of the Sims Memorial. This date, coming as it does at the close of the meeting of the State Medical Association in Charleston and the exercises taking place at Columbia, the Capital City, easily accessible and directly on the way home, should prove to be acceptable for the majority of the members of the South Carolina Medical Association. I feel that the physicians, who however anxious to get back to work, will be glad to pause and see the dreams of the Woman's Auxiliary to the South Carolina Medical Association come true. This splendid achievement is due largely to the masterly leadership and perseverance of Mrs. Daisy Lee Stuckey. The day will be a memorable one in the annals of medicine in South Carolina, a State so rich in historich epochs!

The doctors of South Carolina are not alone proud of Dr. Sims but medical men throughout the entire world who are true to their profession may breath a silent prayer that we will emulate him and certainly we can feel sure we are honored by being members of the profession he adorned. Are we too busy to pause and pay such a tribute to this great Carolinian? Not as a duty but for reverence and affection.

R. E. Hughes, President,
South Carolina Medical Association.

POST GRADUATE COURSE IN THIS ISSUE

Elsewhere in this issue will be found full description of the Post Graduate Course for 1929 put on for the physicians of the State by the Medical College of the State of South Carolina at the request of the State Medical Association. This is a splendid opportunity not duplicated anywhere so far as we know in that



JAMES MARION SIMS

the courses are free of charge. The opportunity will be afforded during the meeting of the State Medical Association for members to arrange the details in regard to enrollment.

SOUTH CAROLINA MENTAL HYGIENE SOCIETY MEETS IN CHARLESTON

Members of the medical profession in this and other states will be interested in the program of the South Carolina Mental Hygiene Society which meets in Charleston May 17 and 18 under the Presidency of Dr. Sylvia Allen of Charleston. Two of the distinguished speakers will be Dr. George K. Pratt, Assistant Medical Director of the National Committee for Mental Hygiene and Dr. George S. Stevenson, Director of the Division on Community Clinics. This organization has been of tremendous inspiration along a line much neglected in the past by the public in general. The discussions in Charleston at this meeting should further stimulate the growth of this society which held a joint meeting during the meeting of the State Medical Association in Columbia last year.

HISTORY OF THE MEMORIAL TO DR. JAMES MARION SIMS

In 1909, Dr. S. C. Baker, Surgeon of Sumter, S. C., and President of the South Carolina Medical Association, in an address before the Convention at Summerville, proposed that the medical profession erect a life size statue of Dr. James Marion Sims on the Capitol Grounds at Columbia.

The following year 1910 a legislative act was passed, providing an appropriation of $5,000 for the Memorial, this to be matched by a similar sum from the doctors.

Less than $100 was collected, the movement lagged. The World War came on, Dr. Baker died in 1918 and the Memorial was lost sight of. But it was not forgotten, for, in the heart of a woman physician lingered the hope, that some day this hero of medicine would receive the belated honor and recognition due him of the people of his native State.

In November 1925 Dr. Sophia Brunson read a paper on "Health," at a Sumter County Federation meeting. She praised Dr. Sims for his wonderful achievement in the field of modern gynecology, which carried the fame of American surgery throughout the civilized world, and lamented the fact that there was not even a tablet in his native state to the memory of this great healer.

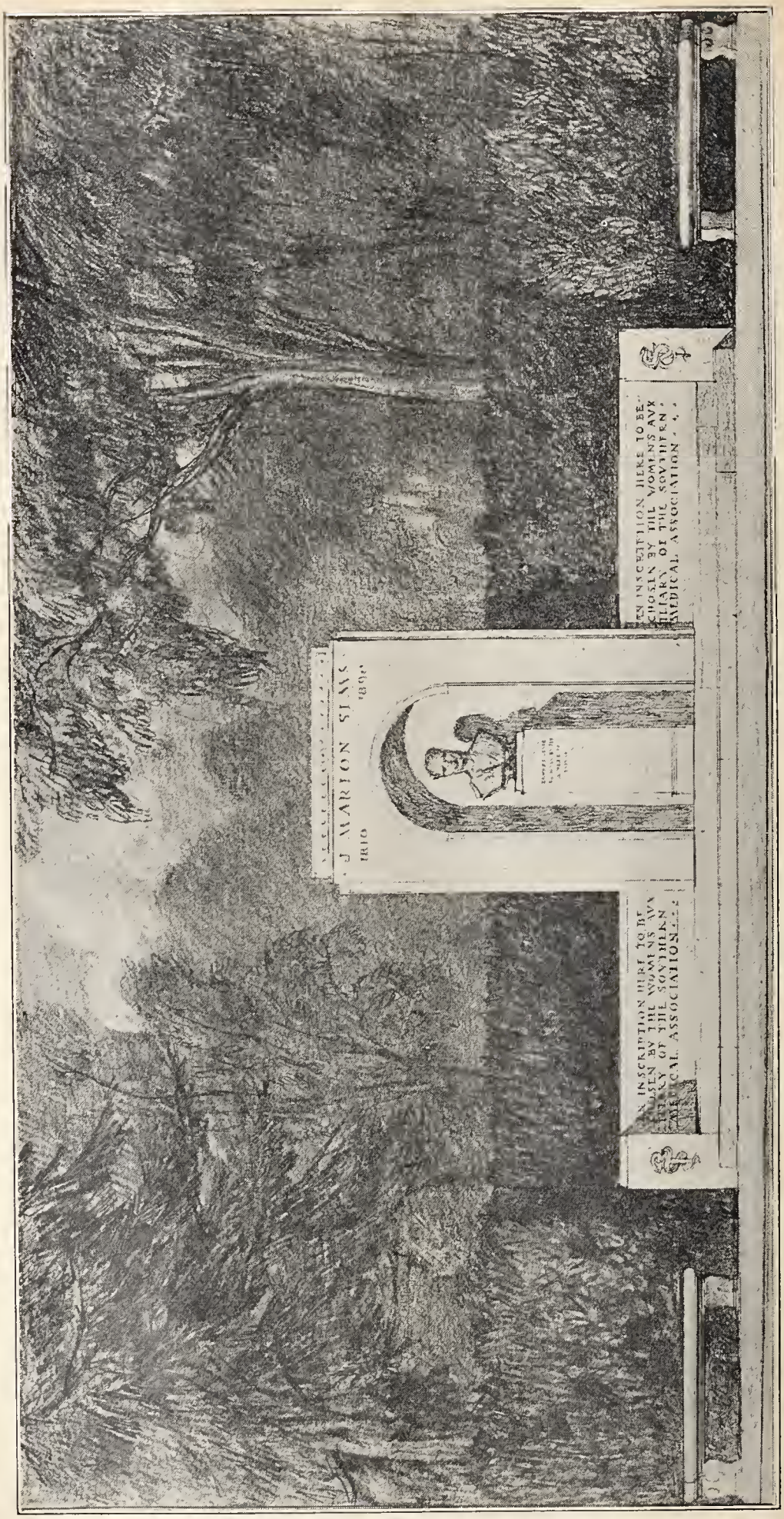
Another woman (the writer) though a native of a distant State was inspired, and at the organization of the Sumter County Woman's Auxiliary at her home in January 1926 she invited Dr. Brunson to speak on Dr. James Marion Sims. So great was the impression made on her hearers that the address was included in the program of the State Auxiliary meeting April 7, 1929 at Sumter. A resolution (offered by the writer) that the Auxiliary work to revive interest in the building of a Memorial to Dr. Sims met with unanimous approval of the assembled body.

The following officers were elected: Mrs. H. M. Stuckey, President, Sumter, S. C.; Mrs. W. R. Wallace, Vice President, Chester, S. C.; Mrs. C. J. Lemmon, Secretary, Sumter, S. C.; Mrs. Wm. Boyd, Treasurer, Columbia, S. C.; Mrs. Frank Harvin, Publicity Secretary, Columbia, S. C. Plans were formulated, and the cooperation of the Medical Association secured to build the Memorial. As the name and works of Dr. Sims was almost unknown to this generation, an educational and publicity campaign was decided upon and begun at once. Many letters and newspaper articles were written which culminated in a state wide celebration of Sims Memorial Day, November 13, 1926 in the schools, colleges, clubs of the State.

One thousand pamphlets entitled, "An Appeal to the People of South Carolina," written by Dr. John Brunson, with a sketch of the life of Dr. Sims, written by Dr. Sophia Brunson were published and distributed.

At the Anderson meeting, the President of the Auxiliary was invited to appear before the Medical Association to report on the progress of the undertaking, exhibit the proposed design and outline plans to collect funds. She was given a vote of approval, and authority to proceed with the plan of asking each doctor and his wife to give ($5.00) five dollars.

In January 1927 several hundred letters were written to prominent Carolinians in and out of



SIMS MEMORIAL

the State, to various organizations and individuals.

The greater part of the money was collected through the County Medical Auxiliaries.

This financial campaign resulted in the collection of about $3,000.

At the Anderson meeting the President, Mrs. Stuckey, was given a second term in order to continue the work on the Sims Memorial which she had begun. The following officers were elected: Mrs. W. H. Nardin, Anderson, S. C., 1st. Vice President; Mrs. I. H. Grimball, Greenville, S. C., 2nd. Vice President; Mrs. Frank Wrenn, Anderson, S. C., Recording Secretary; Mrs. Wm. Boyd, Columbia, S. C., Treasurer; Mrs. C. J. Lemmon, Sumter, S. C., Corresponding Secretary; Mrs. M. L. Parler, Wedgefield, S. C., Publicity Secretary.

In December 1927 several newspapers published a Sims Memorial issue, containing interesting articles by Mr. Wm. Bodie, Mr. James Henry Rice, Jr., Dr. Robt. Wilson, Dr. Bunch and Officers of the Auxiliary. Mrs. M. L. Parler was responsible for the success of this issue, having collected the cuts and edited all the material.

In January 1928 (at the request of the President), the Honorable S. K. Nash introduced a new bill in the legislature asking for an appropriation equal to the sum collected by the Auxiliary. The bill was passed and the amount of $3,000 turned over to the Treasurer, Mrs. Wm. Boyd.

At the Columbia meeting in April 1928 the Sims Committee was formed. Mrs. H. M. Stuckey was elected Chariman, the Committee consisting of the Officers of the Woman's Auxiliary and three members appointed by the President of the Medical Association. They were Doctors Julius H. Taylor, Columbia, S. C., Edgar A. Hines, Seneca, S. C., and A. Johnson Buist, Charleston, S. C.

In the committee's choice of sculptor and architect, invaluable assistance was given by the well known artist Mrs. Marcellus Whaley of Columbia. It had been decided that the form of the Memorial would be a bronze bust of Dr. Sims placed in a classic setting of granite.

Messrs. Edmond Quinn and Harold Sterner of New York City were employed, and the work begun in June 1928 is now completed and ready for unveiling.

The handsome Memorial is situated on the South east corner of the Capitol Grounds, Columbia, on the site selected by the sculptor. It is built of Mt. Airy, N. C., granite in the form of a panelled background containing a niche for the pedestal, on which rests the beautiful bronze bust of Dr. Sims. A Hippocratic Aphorism in bronze lettering adorns the pedestal, and an inscription emblazoning the wonderful achievement of this great and good man, is engraved on either wing of the Memorial.

The Consolidated Stone Company in Columbia erected the Memorial and the cost is something over $6,000.

It is a source of gratification to the Committee and Auxiliary that our dream of three long years has become a reality, and that our work is translated into this beautiful Memorial.

The Woman's Auxiliary of South Carolina has justified its existence by faithfully completing the first great work entrusted to it by the Medical Association.

The Sims Memorial represents the loving devotion of grateful hearts to a great benefactor, and it is a loving shrine to South Carolina Womanhood.

Dr. Sims possessed in a marvelous degree the ideal qualities necessary in a great surgeon.

The brain of an Apollo
The heart of a lion
The eye of an eagle
The hand of a woman.

He used these gifts to bless and enrich the human race—particularly women.

"If the service James Marion Sims rendered to the world could be measured he would deserve a statlier Memorial than any Carolinian who ever lived."

Mrs. H. M. Stuckey,
Chairman of the Sims Memorial Committee.

AN APPRECIATION

To the splendid Officers and Councilors of the Woman's Auxiliary, to the faithful members of the Sims Memorial Committee, to the Editors of the Journal of the South Carolina Medical Association and State newspapers, to the doctors, nurses, club women and friends I wish to express my deep appreciation of the

friendly cooperation and financial aid, without which it would have been impossible to build the beautiful Memorial to Dr. James Marion Sims. Sincerely,

Mrs. H. M. Stuckey,
Chairman of the Sims Memorial Committee.

DESCRIPTION OF THE MEMORIAL TO DR. J. MARION SIMS, COLUMBIA, SOUTH CAROLINA

This memorial is erected in the angle formed by Senate and Sumter Streets on the South West corner of the State Capitol grounds. The monument is designed in the Greek style along simple lines and is executed in dressed granite. The monument is flat in form, the center portion rises and is flanked on each side with lower stones terminating at each end with pilasters at the height of the low stone. In front of the monument is a granite segmented platform with three steps approaching the monument. In front of these steps there is a plaza made of concrete with various colored pebbles made up into panels. The center stone of the monument is seven feet six inches wide and ten feet nine inches high, made of four pieces of stone in the center of which is a recessed panel. The main feature of the monument is a bust of Dr. Sims, executed by Mr. Edmond Quinn, sculptor, which will rest on a granite pedestal engaged in the center panel. The name of Dr. Sims and dates of his birth and death are carved into the center stone and a suitable inscription executed in bronze raised letter is on the pedestal below the bust. Inscriptions of the deeds of Dr. Sims are carved on the stones flanking the center. On each pilaster at ends of the lowstones are carved a caduceus, emblematical of the medical profession. On each side of the plaza approaching the monument has been built two carved stone benches. The monument was designed by Harold Sterner, Architect.

PROGRAM OF UNVEILING CEREMONIES OF THE SIMS' MEMORIAL

Invocation—Dr. John Brunson, Pastor Grace Baptist Church, Sumter, S. C.

Music—The Recessional—University of S. C. Glee Club. Directed by Maurice Matteson.

Unveiling of the bust of Dr. James Marion Sims. By James Marion Sims Witherspoon. (Grand nephew of Dr. Sims).

Introduction of the officers of the Woman's Auxiliary and the members of the Sims Memorial Committee. By Dr. Julius H. Taylor, Columbia, S. C.

Presentation of the Sims' Memorial to the S. C. Medical Association. By Mrs. Henry Mortimer Stuckey, Chairman of the Sims Memorial Committee.

Presentation of the Sims Memorial to the State. By Dr. R. E. Hughes, President S. C. Medical Association.

Acceptance of the Sims Memorial for the State. By Governor John G. Richards.

Address—James Marion Sims, M. D. By Mr. James Rice, Jr.

Memorial wreath placed on bust. By President of Lancaster Chapter of U. D. C.

Music—Carolina Evermore—Music by Mrs. H. M. Stuckey. University of S. C. Glee Club.

Benediction—Dr. John Brunson.

SPECIAL INVITATION TO DONORS

The Sims' Memorial Committee request the honor of your presence at the unveiling ceremonies of the Memorial to Dr. James Marion Sims on Friday afternoon, May 10, 1929, Capitol Grounds, Columbia, S. C.

DEATH OF DR. SPARKMAN

The passing of Dr. W. B. Sparkman of Greenville in the very prime of his usefulness as a surgeon excites more than ordinary sympathy throughout the State. Dr. Sparkman was a comparatively young man who had quietly but surely forged to the front in his profession. He had contributed a number of creditable papers to the Journal and before medical societies.

Dr. Sparkman had rendered an important service to his country as a military surgeon during the World War and in many other ways had endeared himself to a wide circle of acquaintances. He will be keenly missed in organized medicine.

CHARLESTON, A PERSONALITY

"America's Most Beautiful City": "A Foreign City in the United States": "America's Most Historic City": "The Queen City of America": these and other attempts of well-known people have tried to name Charleston. Robert Marks says, "Its spirit has never fully been caught in print because, properly, there is no 'Charleston'."

To one who has known Charleston in a certain way; to one who has grown up elsewhere and then has come to know her; to one who has come to know her intimately and then has gone to live elsewhere; she becomes more than all these, more than a city which may be called by various attractive phrases, she becomes a Personality. Here men and women and little children have lived lives of such a character that it seems they have imparted some of their spirit, some of their very being, to the environs, something tangible which comes to impress itself upon the consciousness of a student of humankind and its products, something "feelingable", as the old Darkie said.

To the visitor this impression may not come, although even a visitor who is a close observer and student may obtain the feeling of its existence. To know a personality one must live in companionship with it.

To the visitor the more tangible things belonging to Charleston are the things of interest.

In any city one wants to know of its educational interests and facilities. In Charleston one finds a thorough and complete system of public education, from kindergarten in the Ward schools to the Academic degree from the College of Charleston, and a citizen of this municipality may obtain a completed general education at public expense In addition there are two State schools, the Citadel and the Medical College of the State of South Carolina, standing in the highest ranks of their respective fields. There are also a number of Church schools, special schools for Negroes, a public vocational school, and private schools of several orders.

To medical people a great interest will be in the medical center consisting of the several parts and plants of the Medical College of the State of South Carolina and the Roper Hospital, institutions old in experience in training physicians and nurses and pharmacists and young in progressive development and extension of their services to the people of the State.

Charleston's Commercial Attributes naturally relate to her port facilties. Into a beautiful and splendid harbor enter ships from the world, and in the past few years her growth as a port has been particularly progressive.

Of her 160 factories and industrial plants those of the oil companies, particularly the Standard, and of the fertilizer and chemical industries are conspicuous.

Of roads Charleston has the most beautiful, entering from the South over the magnificent Ashley River Memorial Bridge and from the North entry will soon be over the Cooper River Bridge, now under construction.

Of beaches there are three of unexcelled character within a few minutes drive.

Perhaps Charleston is more widely known for the world famous Magnolia and Middleton Gardens than for any one other feature. Here come thousands of pilgrims each Spring. The Grand Canyon has never been described in words, neither have these gardens.

Of the U. S. Navy Yard, where come the defenders of the Country; of the Army post and its tremendous guns; of Fort Moultrie, reminiscent of the birth War of the Nation and of Jasper and Osceola; of Fort Sumter, shrine of the Confederate romance; of the famous churches, St. Michaels with her precious chimes and haunting memories of Washington and Lafayette, St. Philips with her centuries old mariners signal light; the French Huguenot, bespeaking an important element of pioneers, and the only one of its kind in this country, St. James on Goose Creek, still with the Royal Coat of Arms of Britain over her altar and, I believe, still subject to the church of England, if any, etc., etc.; of the relics of Revolutionary, Confederate and World Wars; of the magnificent old homes and estates, breathing the romance of a time which is gone; of the Battery; of the Bay and its tributary rivers; of the beautiful and romantic sea islands; of the Charleston Country Club, which Joe Kirkwood says has the "the third best (golf course) in America"; of the great prog-



MEDICAL COLLEGE OF THE STATE OF S. C., MAIN BUILDING

ress of recent years in the industries, in roads and bridges (Ashley, Cooper, Santee, Edisto), and in paving; of the hunting, the fishing, the boating, the swimming, the climate; of each of these and more one might write separately and at more length than is here permissible for all.

Of her spirit, as Adams Hayne said, "War and pestilence she has known, fire and tornado, earthquake and oppression, and never has she bowed her head".

All in all, Charleston is the most interesting place on this continent and one of the most interesting and inspiring on the globe. Come and see.

K. M. L.

FINAL PROGRAM SOUTH CAROLINA MEDICAL ASSOCIATION CHARLESTON, S. C.

May 7, 8 and 9, 1929

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Dr. J. R. Sparkman—Spartanburg, S. C.

Committee on Study and Prevention of Venereal Diseases

Dr. George Neel, Chairman—Greenwood, S. C.
Dr. O. F. Finklea—Florence, S. C.
Dr. C. N. Wyatt—Laurens, S. C.

Committee on Constitution and By-Laws

Dr. J. H. Cannon, Chairman—Charleston, S. C.
Dr. Jas. S. Fouche—Columbia, S. C.
Dr. E. A. Hines—Seneca, S. C.

Committee on Medical Education

Dr. G. McF. Mood, Ch'mn—Charleston, S. C.
Dr. H. S. Black—Spartanburg, S. C.
Dr. C. B. Epps—Sumter, S. C.
Dr. R. L. Kirkpatrick—Bennettsville, S. C.
Dr. Lee W. Milford—Clemson College, S. C.

Local Committee on Arrangements

Dr. Kenneth M. Lynch, Chairman; Dr. H. P. Jackson, Dr. W. Atmar Smith, Dr. C. W. Kollock, Dr. Francis L. Parker, Dr. J. H. Cannon, Dr. Olin B. Chamberlain, Dr. T. E. Bowers, Dr. A. E. Baker, Jr., Dr. J. W. Burns.

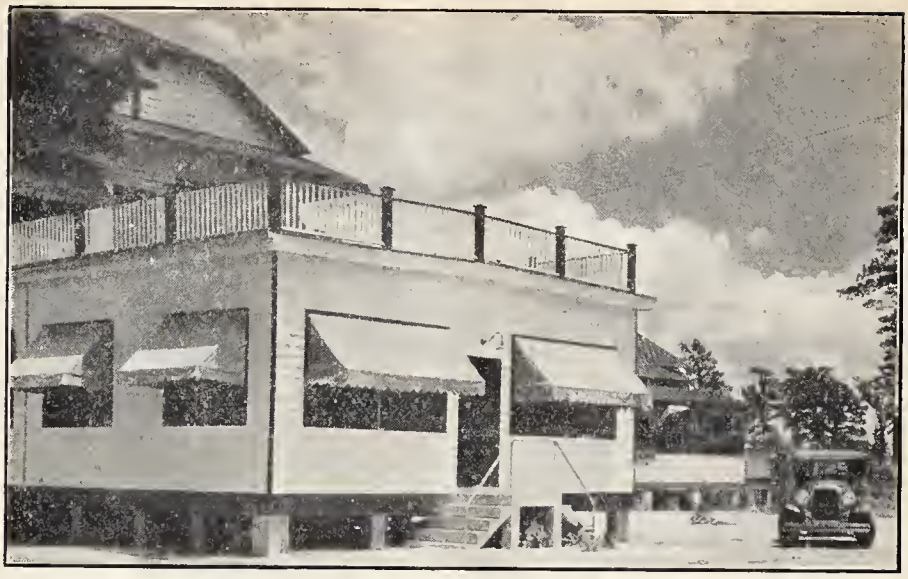
FINAL PROGRAM

HOUSE OF DELEGATES

TUESDAY, MAY 7, 8:00 P. M.

FRANCIS MARION HOTEL

General Order will be as follows:
Committee on Credentials will convene at 7:30 p. m.
Delegates should obtain credentials before leaving home.
Called to order by the President at 8:00 p. m.
Report of Committee on Credentials.
Address by the President.
Report of Secretary-Treasurer.
Report of Councilors.
Report of Chairman, Dr. S. E. Harmon.
  First District—Dr. J. H. Cannon.
  Second District—Dr. S. E. Harmon.
  Third District—Dr. T. L. W. Bailey.
  Fourth District—Dr. R. C. Bruce.
  Fifth District—Dr. J. R. Des Portes.
  Sixth District—Dr. C. R. May.
  Seventh District—Dr. T. R. Littlejohn.
  Eighth District—Dr. J. E. Warnock.
Report of Scientific Committee.
Report of Committee on Legislation.
Report of Committee on Constitution and By-Laws.
Report of State Board of Health.
Report of Committee on Health and Public Instruction.
Report of State Board of Medical Examiners.
Report of Delegates to American Medical Association.



ONE OF THE PAVILIONS AT PINEHAVEN, CHARLESTON COUNTY TUBERCULOSIS SANATORIUM

Report of Committee on Prevention of Venereal Diseases.
Report of Committee on Efficiency and Hospital Standardization.
Report of Committee on Military Affairs.
Report of Committee on Necrology.
Report of Committee on Medical Education.
Introduction of New Business.
Miscellaneous Business.
Election of Officers.
Adjournment.

SCIENTIFIC SESSION

Francis Marion Hotel

TUESDAY, MAY 7, 1929

3:30 to 5:30 P. M.

CLINICS

Final Program

Roper Hospital. Clinics by Faculty.

3:30 P. M. Pediatric Clinic—Dr. M. W. Beach.
4:00 P. M. Cardio-renal Clinic—Dr. J. H. Cannon.
4:30 P. M. Neurological Clinic—Dr. O. B. Chamberlain.
5:00 P. M. Hyperthyroidism, Clinical Considerations—Dr. Wm. H. Prioleau.
5:00 P. M. X-Ray Clinic, for Radiologists—Drs. Taft and Palmer.
4:30 P. M. Pinehaven (Charleston County Tuberculosis Sanatorium) Artificial Pneumothorax Clinic—Dr. W. A. Smith.

WEDNESDAY, MAY 8, 9 A. M.

Call to order by the President.

Invocation by Dr. William Way, Rector of Grace Church, Charleston.



ROPER HOSPITAL, MAIN BUILDING

Address of Welcome by Mayor Thomas P. Stoney.

Address of Welcome on behalf of the Medical Society of South Carolina, by Dr. Henry P. Jackson, President.

Response.

PRESIDENT'S ADDRESS

By Dr. R. E. Hughes, Laurens, S. C.

Presentation of gavel by Dr. Baxter Haynes, Spartanburg, S. C.

"In Memory of Our Dead Comrades"

Gavel made of wood from Orente Province, Cuba.

Received by Dr. C. W. Kollock, Charleston, S. C.

PAPERS

Reading time of papers fifteen minutes. Discussion five minutes.

1

Vegetable Food and the Goitre Problem.

By Dr. Roe E. Remington, Director of Laboratory, S. C. Food Research Commission, Medical College of the State of South Carolina, Charleston, S. C.

Discussion opened by Dr. William Weston, Columbia, S. C.

2

Some Observations on First Reported Cases of Malta Fever in South Carolina.

By Dr. E. A. Hines, Seneca, S. C.

Discussion opened by Dr. W. K. Lewis, State Veterinarian and Director Clemson College Live Stock Sanitary Department, Columbia, S. C., and Dr. H. M. Smith, Director State Board Health Laboratory, Columbia, S. C.

3

Osgood-Schlatter's Disease (moving picture film).

By Dr. R. B. Taft, Charleston, S. C.

Discussion opened by Dr. A. J. Buist, Charleston, S. C., and Dr. J. Warren White, Greenville, S. C.

4

Peptic Ulcer Observation Based on 93 Cases (Lantern Slides).

By Dr. Sam Orr Black, Spartanburg, S. C.

Discussion opened by Dr. Charles A. Mobley, Orangeburg, S. C., and Dr. R. E. Abell, Chester, S. C.

5

A report of Some Traumatic Surgical Cases.

By Dr. T. B. Reeves, Greenville, S. C.

Discussion opened by Dr. J. Warren White, Greenville, S. C., and Dr. Le Grand Guerry, Columbia, S. C.

6

Certain Surgical Problems of the General Practitioner.

By Dr. J. H. Taylor, Columbia, S. C.

Discussion opened by Dr. Robt. Abell, Chester, S. C., and Dr. William Rhett, Charleston, S. C.

Recess 1:00 to 2:30 P. M.

AFTERNOON SESSION

2:30 to 6:00 P. M.

7

Review of Findings on 100 Cases of Head Injury.

By Dr. D. L. Maguire, Charleston, S. C.

Discussion opened by Dr. Olin B. Chamberlain, Charleston, S. C., and Dr. T. E. Bowers, Charleston, S. C.

8

Some Uses of Magnesium Sulphate in Surgical Practice.

By Dr. J. R. Young, Anderson, S. C.

Discussion opened by Dr. F. H. McLeod, Florence, S. C., and Dr. J. S. Rhame, Charleston, S. C.

9

Heart Wounds, Their Management, Treatment and History, with the Presentation of a Patient.

By Dr. R. G. Doughty, Columbia, S. C.

Discussion opened by Dr. S. W. Talbert, Columbia, S. C., and Dr. Le Grand Guerry, Columbia, S. C.

10

Some Diagnostic and Therapeutic Problems.

By Dr. Roy P. Finney, Spartanburg, S. C.

Discussion opened by Dr. Hugh Smith, Greenville, S. C., and Dr. Robt. Houseal, Newberry, S. C.

11

Aplastic Forms of Anemia.

By Dr. W. R. Mead, Florence, S. C.

Discussion opened by Dr. O. B. Mayer, Columbia, S. C., and Dr. J. R. Price, Florence, S. C.

12

Tuberculosis of the Stomach, with Report of a Case.

By Dr. G. T. Tyler, Greenville, S. C.

Discussion opened by Dr. Julius H. Taylor, Columbia, S. C., and Dr. O. B. Mayer, Columbia, S. C.

Recess 6:00 to 8:00 P. M.

NIGHT SESSION—VICTORY THEATRE

8:00 to 10:00 P. M.

Early Diagnosis and Treatment of Brain Tumors.

By Dr. Walter E. Dandy, Johns Hopkins Hospital, Baltimore, Maryland.

The Significance of Retinitis in Hypertension.

By Dr. Henry P. Wagener, Mayo Clinic, Rochester, Minnesota.

Motion picture film showing the growth and be-



COLLEGE OF CHARLESTON

havior of cancer cells, by the State Cancer Committee.

THURSDAY, MAY 9, 1929

FRANCIS MARION BALL ROOM
8:30 A. M.

Morning Session

CLINICS

Pathological Conference—Dr. Kenneth M. Lynch, Charleston, S. C., and Dr. Robert Wilson, Charleston, S. C.

Surgical Clinic—Dr. F. H. McLeod and Dr. P. D. Hay, Florence, S. C.

Pediatric Clinic—Dr. Wm. Weston, Columbia, S. C.

Orthopedic Clinic—Dr. J. Warren White, Greenville, S. C.

Medical Clinic—Dr. Hugh Smith, Greenville, S. C.

Afternoon Session
2:00 P. M.

PAPERS

13

Foreign Bodies, including a Revolver Bullet, Obstructing the Urethra.
By Dr. Marion H. Wyman, Columbia, S. C.



COOPER RIVER WATER FRONT

Discussion opened by Dr. Le Grand Guerry, Columbia, S. C., and Dr. R. S. Cathcart, Charleston, S. C.

14

Toxemia of Pregnancy.
By Dr. H. W. DeSaussure, Charleston, S. C.
Discussion opened by Dr. R. E. Seibels, Columbia, S. C., and Dr. L. A. Wilson, Charleston, S. C.

15

Some Unusual Complications of Pregnancy and Labor with a Brief Report of a Few Cases.
By Dr. Willard C. Hearin, Greenville, S. C.
Discussion opened by Dr. L. A. Wilson, Charleston, S. C., and Dr. J. D. Guess, Greenville, S. C.

16

History of the Vaginal Speculum.
By Dr. R. E. Seibels, Columbia, S. C.
Discussion opened by Dr. Julius H. Taylor, Columbia, S. C.

17

The Physiology of the Kidneys with Clinical Applications.
By Dr. J. Van de Erve, Medical College, Charleston, S. C.
Discussion opened by Dr. J. H. Cannon, Charleston, S. C., and Dr. F. Raymond Price, Charleston, S. C.

18

The General Practitioner and the Medical Society.
By Dr. J. A. Norton, Conway, S. C.
Discussion opened by Dr. Z. G. Smith, Marion, S. C., and Dr. G. H. Westrope, Lexington, S. C.

COMMERCIAL EXHIBITORS

1. Victor X-Ray Corporation.
2. J. A. Majors Co.
3. Mellins Food.
4. Mead, Johnson & Co.
5. Powers and Anderson.
6. Winchester Surgical Supply Co.

SCIENTIFIC EXHIBITORS

1. American Medical Association, Bureau of Health and Public Instruction.
2. American Medical Association Bureau of Investigation.
3. American Heart Association.
4. American Social Hygiene Association.
5. Clemson College Live Stock Sanitary Department: Abortus Infection in Cattle.
6. Food Research Commission (Dr. Remington).
7. Department of Clinical Pathology, Medical College of the State of South Carolina.
8. Department of Pathology, Medical College of the State of South Carolina.
9. Metropolitan Life Insurance Company of New York, New York.
10. National Tuberculosis Association, The South Carolina Branch of Columbia, S. C.
11. Department of Anatomy, Medical College of the State of South Carolina.
12. Dr. R. B. Taft, X-Ray Department, Medical College of the State of South Carolina.
13. Dr. William Weston, Columbia, South Carolina.
14. Dr. J. Warren White, Shrine Hospital of Greenville, South Carolina.
15. Retinal and other Defects in Eye Ground, Dr. H. P. Wagener, Rochester, Minn.

WOMAN'S AUXILIARY

ENTERTAINMENT

Tuesday, May 7.

4:00 p. m. Beach party. Residence of Mrs. A. E. Baker, Folly Beach.

Wednesday, May 8.

10 a. m. Business Meeting, St. Michael's Parish House, Meeting St.

1:00 p. m. Luncheon, Brewton Inn, given by the local Woman's Auxiliary to the Medical Society.

2:30 p. m. Business Meeting, St. Michael's Parish House.

5-7 p. m. Tea, Complimentary to Patriotic Societies and the Medical Auxiliary, by Auxiliary to Post No. 10, American Legion.

Thursday, May 9th.

10 a. m. to 12 m. Boat trip to Fort Sumter.

HIGH SPOTS OF THE CHARLESTON MEETING AND OTHER INFORMATION

MAY 7, 8, and 8, 1929

Our Invited Guests

We are extremely fortunate this year in the calibre of the invited guests. Dr. Walter E. Dandy, Associate Professor of Surgery, at the far famed Johns Hopkins Medical School and Hospital is one of the outstanding neurologic surgeons of the world. He has contributed largely to the literature and is indeed a speaker of unusual ability.

Dr. Henry P. Wagener, of the great Mayo Clinic, Associate Professor of Ophthamology in the graduate school there, is a South Carolinian whose attainments in the world's greatest clinic reflects credit on his native State.

Dr. Roe E. Remington, Director of the Laboratory, South Carolina Food Research Commission, at our State Medical College has already won for himself an enviable reputation. South



CHARLESTON NAVY YARD

Carolina has been brought into the lime-light throughout the nation as a result of the activities of this Commission.

Outstanding Scientific Papers

One of the interesting surgical problems is that of the resources available when the doctor comes face to face suddenly with a serious wound of the heart. A paper on this rare accident will be read and the patient presented.

In recent months the State Board of Health Laboratory in conjunction with a number of physicians in different parts of the State has brought to the attention of the profession the fact that Malta Fever has invaded South Carolina. A paper will be presented on this subject and the Directors of both the State Board of Health Laboratory and the Clemson College Live Stock Sanitary Laboratory will participate in the discussion. It is expected that there will be a scientific exhibit bearing on this disease from the Bureau of Animal Industry, Washington, D. C.

The surgical papers cover a wide range of subjects and should prove to be especially attractive to the general practitioner.

A moving picture film especially prepared for the Charleston meeting on Osgood-Schlatters disease will be shown. This feature promises to be of unusual interest.

For several years the Scientific Committee has encouraged papers on obstetrical subjects owing to the high maternal mortality in South



ASHLEY RIVER MEMORIAL BRIDGE



INSIDE YACHT ROUTE. FROM QUEBEC TO FLORIDA
ENTERING CHARLESTON HARBOR

Carolina. On the program will be found several obstetrical papers worthy of note.

Clinics

For many months elaborate preparations have been in progress toward making this annual session preeminently a clinical meeting. The facilities in Charleston with the experience of more than a hundred years as a teaching center assures success of this idea.

Scientific Exhibits

The greatest effort ever put forth by the Association has been made this year to enlarge the scope of scientific exhibits. These exhibits have come to mean a distinct addition to the educational value of the State Medical Association.

Commercial Exhibits

In recent years the Association has favored more extensive commercial exhibits in order that the profession may have first hand knowledge of these accessories of medical practice.

Woman's Auxiliary

The Woman's Auxiliary meeting offers a rare opportunity for social contact in the city of Charleston, world famous for its charming hospitality.

Entertainments

The President's reception at the Francis Marion Hotel on the evening of May 8 will enable the profession of the State to meet the citizens



HAMPTON PARK, CHARLESTON



THE CITADEL, MILITARY COLLEGE OF S. C.

of Charleston at a function which has now become an event looked forward to with the keenest pleasure each year. Dancing will follow the reception.

Alumni Meetings

The assembling in the shadow of South Carolina's time honored medical school presents an unusual opportunity for not only the graduates of our State school but the alumni of all other medical schools to come together in the common cause of higher medical education in South Carolina and the South.

Golf

Members of the Association will be invited to play on the Wappo Links of the Charleston Country Club as they desire.

Eye, Ear, Nose & Throat Society

The South Carolina Society of Ophthalmology and Oto-Laryngology will hold a Business Meeting May 8.

Public Health Meeting

One of the spectacular allied societies in its rapid growth, intensity of interest and beneficent purpose is the South Carolina Public Health Association. The meeting will be held on Tuesday, May 7.

Pediatric Society

The South Carolina Pediatric Society will hold a meeting as usual and an invitation is extended to every physician in the State who has a keen desire to know more about the diseases



THE BATTERY, CHARLESTON



FORT SUMTER

of children to be present and join the Society. The Society is now on a solid foundation, growing rapidly and is a power in the State for the promotion of child welfare and the practice of scientific pediatrics.

Fraternal Delegates

The following delegates have been appointed by the Georgia Medical Association to attend the meeting in Charleston: Drs. C. S. Jernigan, Sparta, and V. P. Sydenstricker, Augusta.

Hotels

The following information is available in regard to hotels: The Francis Marion Hotel, Headquarters and place of meeting, will accommodate as many as 300 at a $3.00 rate, except for single rooms. Anyone wanting a single room or special accommodations may make reservations at regular rates. The Fort Sumter has a rate of $3.50 to $4.00 per day for single rooms and $5.00 to $6.00 for rooms occupied by two persons. The St. Johns Hotel, single with bath $2.50, double with bath $2.00 per person, single without bath $1.50, double without bath $1.25 per person. Charleston Hotel, single without bath, $1.50, double without bath $3.00, single with bath $2.50, double with bath $4.00. Argyle Hotel, $1.50 per person without bath, $2.00 to $2.50 per person with bath. Timrod Inn, one person with bath $1.75, $2.00 and $2.50; one person without bath $1.25 and $1.50, two persons with bath $3.50 to $4.00, two persons without bath $2.50. Reservations may be made directly with the hotel desired or through Dr. H. P. Jackson, 109 Broad St., or Dr. Kenneth M. Lynch, Medical College, both of Charleston, S. C.

PROGRAM OF THE SOUTH CAROLINA PUBLIC HEALTH ASSOCIATION, ANNUAL MEETING, FRANCIS MARION HOTEL, CHARLESTON, S. C., MAY 7, 1929

Morning Session, 10:00 A. M.

Meeting called to order—H. Grady Callison, M. D., County Health Officer, Newberry, S. C., President of the Association.

Invocation—Reverend William Way, Charleston, S. C.

Address of Welcome—Honorable Thomas P. Stoney, Mayor of Charleston, S. C.

Response—James A. Hayne, M. D., State Health Officer, Columbia, S. C.

Immunity—George McF. Mood, M. D., Professor of Bacteriology and Hygiene, Medical College of the State of South Carolina, Charleston, S. C.

Cancer Control—Kenneth M. Lynch, M. D., Professor of Pathology, Medical College of the State of South Carolina, Charleston, S. C.

The Use and Mis-use of the Laboratory—F. B. Johnson, M. D., Professor of Clinical Pathology, Medical College of the State of South Carolina, Charleston, S. C.

A Rational Basis for a Program of Improving the Hygiene of Maternity and Infancy, with a Record of the Progress made in Savannah, Georgia—V. H. Bassett, M. D., County and City Health Officer, Savannah, Ga.

Can South Carolina Eradicate Diphtheria?—Paul Eaton, M. D., Associate Professor of Preventive Medicine, Medical Department, University of Georgia, Augusta, Ga.

Is Rural Sanitation Improving?—A. E. Legare, B. S., C. E., Sanitary Engineer, State Board of Health, Columbia, S. C.

A Combination County and City Health De-



ROAD OUT OF CHARLESTON

partment—Leon Banov, M. D., County and City Health Officer, Charleston, S. C.

The County Health Unit—John B. Setzler, M. D., County Health Officer, Dillon, S. C.

The Hospital in a Public Health Program—J. Moss Beeler, M. D., Superintendent of Spartanburg General Hospital and County Health Officer, Spartanburg, S. C.

Lunch 1:30 P. M., Francis Marion Hotel.

Afternoon Session, 3:00 P. M.

Committee Reports:
- Executive Committee.
- Membership Committee.
- Auditing Committee.
- Publicity Committee.

Miscellaneous Business.

Election of Officers.

Adjournment.

Officers

H. Grady Callison, M. D. _____ President
Newberry, S. C.

Miss Nellie C. Cunningham _____ Sec.-Treas.
Columbia, S. C.

POST GRADUATE COURSE MEDICAL COLLEGE, STATE OF SOUTH CAROLINA

ANNOUNCEMENT

A third post graduate course will be conducted by the Medical College of the State of South Carolina, beginning May 27th and extending



MAGNOLIA GARDENS, CHARLESTON

through June 8th. This course is being given in response to the request of the State Medical Association, made in 1927. The success of the first undertaking has warranted the attempt to hold it annually. It is offered especially to members of the profession of South Carolina, and alumni of this College, but any physicians who desire to attend will be welcome.

No charges will be made.

DESCRIPTION OF COURSE

Clinics will be given at the Roper Hospital by the Faculty of the College. The greatest amount of time will be devoted to internal medicine, pediatrics, surgical diagnosis and obstetrics. Visiting physicians will be given the opportunity of examining patients and will be encouraged to enter into the discussions. An opportunity to study diagnosis if offered by the abundant material in the wards of the hospital. The class will be divided into several groups, under direction of the clinical teacher in order that individual instruction be given. The facilities of Pinehaven Sanatorium have been made available for instruction, and two afternoon periods will be devoted to clinics there. Particular attention will be given to laboratory interpretation and the correlation between laboratory and clinical work. Those who wish to give more time to laboratory technique will be afforded an opportunity of doing so. Those desiring special instruction in X-ray interpretation can arrange to get this experience. The laboratories of physiology and anatomy will be open every day, and the practical application of physiology and regional anatomy may be studied in connection with clinical work. The pathological conference, which will be held four afternoons in each week will give the opportunity of correlating clinical work with pathological findings. All are invited to take part in the discussions, which are always stimulating and instructive. On two evenings each week there will be a lecture on some of the outstanding problems of clinical medicine.

THE DEAN.
Medical College of the State of S. C.

Schedules of Lectures and Clinics—

A. M.	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
9:00	Pediatrics	Pediatrics	Opthalmology	Pediatrics	Pediatrics	General Surgical Diagnosis
10:00	Internal Medicine	Internal Medicine	Otolaryngology	Internal Medicine	Internal Medicine	Internal Medicine Neuro Psychiatry
11:00	Laboratory Interpretation	Pathology	Surgical Diagnosis	Dermatology	Neuro Psychiatry	Obstetrics
P. M. 12:00	Pathology	Obstetrics	Gynecological Diagnosis	Obstetrics	Obstetrics	
3:30-5 4-6	Physical Diagnosis	Tuberculosis Clinics Pinehaven Sanatorium*	Physical Diagnosis	Physical Diagnosis	Genito-urinary Diseases	
5-6	Clinico-Pathological		Clinico-Pathological Conference	Clinico-Pathological Conference	Clinico-pathological Conference	
8:30	Conference					

*The first clinic will be devoted to the diagnosis of Pulmonary Tuberculosis and the second to the treatment, including heliotheraphy and artificial pneumothorax. **Subject and speaker to be announced.

The routine surgical clinics will be conducted at the Roper Hospital and all who so desire may avail themselves of them. Special courses in anatomy, animal surgery and other subjects will be arranged for classes of ten or more. Those desiring these courses should make application early so that suitable arrangements can be made. In case a class in animal surgery is desired, a fee of $10 each will be charged to cover the necessary expenses of the course.

ORIGINAL ARTICLES

*THE USE OF THE ROENTGENOLOGIST AS A CONSULTANT IN SURGICAL LESIONS

By Herbert H. Schoenfeld, M. D., Washington, D. C.

A Roentgenologist may be defined as an individual skilled in the diagnostic and therapeutic application of the roentgen ray.

The prerequisites for skill in this phase of work demands that the individual be, and primarily consider himself, a physician.

As a physician, the roentgenologist should be considered amenable to the same perquisites, obligations, and ethics as other physicians, in his relation to the patient and to his colleagues. His colleagues, on the other hand should consider him in the same light.

My purpose in this discussion is to recall to your attention a number of the outstanding uses of the X-ray, especially in diagnosis, and as an aid to, or treatment in some surgical lesions.

I shall confine myself to a limited number of points arising in my own experience, and principally involving usual cases.

Let us consider traumatic cases. We are all agreed, and even the law, which is principally evolved by laymen, demands the usual practice of X-ray examination in suspected bone injuries. It is not unusual, however, even in fractures involving the long bones, to have an X-ray reported negative. This may readily be understood when we remember the fact that the roentgenologist has not made a clinical examination, nor applied a primary dressing, and, in consequence, centers his examination over an area distant from the site of injury. Were the individual who makes the clinical examination in attendance, at the time of radiography, such an error would be obviated. On the other hand, it is unwise to rely upon clinical examination, particularly in an injury about a joint, as one frequently sees what are merely supposed to be bad sprains, which have a definite so-called fracture-sprain involvement. The X-ray is essential in establishing this diagnosis.

A more frequent reduction of fracture under the fluoroscope, than at present done by most men, will give a higher percentage of satisfactory results. The fluoroscope should be used, even though, for purposes of record and legal protection, we make a permanent photographic record.

A type of injury, which is much more frequent than is usually thought, exists in relation to the vertebrae. A relatively large number of spinal injuries are simply associated with pain in the back, which is ascribed to wrenching and straining of the muscles, and has no concomitant neurological signs involving either the motor, sensory, or sympathetic systems. Particularly in those cases having a history of a fall, in which they land upon their feet, or in a sitting position, or upon the head, and in which there is even the slightest complaint of backache, roentgenologic study of the spine is indicated. A number of these patients will be found to have compressed fractures, of greater or less degree, of one or more vertebrae. Fortunately, from a neurological standpoint, these injuries are more frequently seen involving a lumbar vertebra, and time, with fixation, gives uniformly good results in obviating chronic backache sufferers.

The X-ray in head injuries, however, is not to be relied upon, when reported negative. With the exception of compound or depressed fractures of the cranium, our treatment of these cases is not in the least predicated upon the presence or absence of visible lines of fracture, but rather upon the neuro-physiological factors.

Foreign bodies, particularly in industrial communities, are frequently the cause of grave injuries of themselves, and secondarily by surgery. Even in a housewife—who has not observed a physician hunting for an hour or two for the tip of a pin or needle embedded in a

*Read before the Columbia Medical Society, January 14, 1929.

hand or foot? The removal of foreign bodies, especially those which are radio-opaque, is so simply carried out under the fluoroscope, that there is no longer any excuse for prolonged, painful, mutilating surgery on these patients. Either under local or general anesthetic, in the fluoroscopic room, with the aid of the roentgenologist, such foreign body is readily localized, a small incision made over the elected point, and, by means of a forcep, the material quickly removed, followed by appropriate suture.

I have had a little girl of seven years, who slid from her mother's lap, breaking off a needle from her mother's sewing, a part of which became embedded in the buttock. She was brought immediately to my office. Being certain that I could feel the needle immediately under the skin, and after infiltration with novocain, I cut down upon it. After a twenty minute search, without finding the needle, I took the child to the fluoroscopic room, where we immediately located the needle, and extracted it without difficulty.

I have recently had a colored man, who, while opening a packing case with a hatchet, chipped a piece of the hatchet off. This struck his nose, just above the bridge, and became embedded in the upper eyelid. Even though he was seen within thirty minutes, there was so much oedema of the eyelid, that the foreign body could not be felt. It was a relatively simple matter, under the fluoroscope, to extract this steel by way of the opening on the nose, and through the tract of its progress to the eyelid.

Those of us, who have a relatively large number of children to deal with, are impressed by the abuse of surgery in adenitis, particularly those of tuberculous origin, which, when they liquefy, are frequently incised and drained. Such treatment of tuberculous adenitis, as in other tuberculous abscesses, is reprehensible. It is unfortunate that we are forced to open those abscesses of pyogenic origin, and tuberculous abscesses which have a secondary pyogenic infection, if for no other reason than the cosmetic one. Of course, I will admit that tuberculous adenitis frequently is primary, especially in children, and also there is frequently secondary infection in these glands. The diagnosis of pyogenic infection may be readily made by aspiration, followed by smear and culture examination. Those cases which are not pyogenic, should be aspirated as dry as possible, and referred to the radiologist for X-ray and actinic therapy. Those cases having been opened, with dirty, discharging sinuses, are also readily cured by prolonged therapy of this type, and seldom by any surgical means. At the Children's Hospital in Washington, we see a large number of adenitides. Even those cases, which have a luetic factor, frequently have a superimposed tuberculous factor, and they do well under radiation, hygienic measures and specific treatment.

A gland of considerable interest to the internist, surgeon and roentgenologist, particularly in adults, is the thyroid. Of course, being principally interested in surgery, even though by the roentgenologist considered, sometimes, as against the patient's welfare, I, as a surgeon, consider the toxic thyroid as a surgical condition. (It would be unwise in any discussion of this scope to enter upon the moot points as between surgery and X-ray in the therapy of toxic thyroids.) Practically all thyroids, however, that are to be operated upon, should have preliminary examination by X-ray, to rule out absolutely the presence of substernal or infraclavicular growths. There is an occasional necessity for entering the upper mediastinum by section of the clavicles or sternum, which demands careful preoperative preparation both from the standpoint of anesthetic and surgical instruments; and, needless to say, the surgical novice would be very much embarrassed by a large tumor mass, the care of which he might not be properly prepared for.

Not only should thyroids have such examination of the neck and upper chest, but also of the whole chest. The X-ray, as you well know, will frequently point out grave cardiac pathology.

In at least one case which I remember distinctly, an X-ray of the chest would have demonstrated a very much enlarged thymus. The patient, a young colored woman, and apparently an ideal operative risk, while under general anesthetic, given by one of our best anesthetists, died suddenly on the table without apparent cause. This woman, at autopsy,

showed a tremendous thymus. Her death was undoubtedly due to status lymphaticus.

I would call your attention further to the thymus, particularly in children. Up to three years ago at the Children's Hospital in Washington, the number of sudden operative and post-operative deaths was a distressing problem. These were frequently in cases operated for simple conditions, such as circumcision, tonsillectomy, and fractures. In the past three years, we have had only one such death in a patient X-rayed pre-operatively, and felt to be within normal limits as to the thymic shadow. This particular case, occurring very recently, showed a thymic shadow, which was taken to be at or about the wide limit. As an arbitrary standard, we consider, on an antero-posterior plate, that a thymic shadow measuring above 33% of the total width of the chest is above normal. All elective surgical procedures done on our open wards are required to have a pre-operative plate made of the chest. We even, as a rule, film the emergencies as well, though, of course, we cannot allow the fact of a possibly enlarged thymus to prevent necessary procedures. It is extremely unfortunate that we cannot require men to give as good attention to their private cases as is given to the charity patients.

The thymus, when found enlarged, is treated by radiation with X-ray. A very small dose is usually sufficient to cause retrogression to within safe limits in ten days. Of all the things brought out in this paper, I would especially emphasize the question of thymus as a factor in surgery, even though the admission must be made that at the present time little of the true physiology is known.

The X-ray and fluoroscope should be frequently used in the diagnosis and treatment of pleural effusions, especially those of the purulent type. It is important, primarily, to know both the upper and lower level presented by the accumulation, so that drainage may be instituted at the necessary point. This fact does not complete the subject. The course of inflation of the lungs with diminution of the cavity may be watched and accurately estimated on subsequent examinations. Not infrequently do we see an empyema patient, who has been afebrile, again begin to run a septic temperature. In this patient, examined fluoroscopically, we may find a drainage tube, which we know is patent, is not doing its work properly because of such a simple thing as having the tube pushed into the chest too far. Proper placement of the tube, under one's vision will clear up an embarrassing situation.

Another condition, making X-ray examination of the chest important from a surgical standpoint, is the showing up of various types of pulmonary pathology, which might alter the diagnosis of seeming abdominal lesions, and also the types of anesthetic to be used, and even the possible postponement of, or refusal to perform elective surgical procedures. This includes the ruling out of metastatic malignances, pneumonia, tuberculosis, and other frequent pulmonary conditions.

In so far as abdominal lesions are concerned, the laity, as well as the profession, is well aware of the exactness of diagnosis made by X-ray study. In fact, X-ray study of the gastro-intestinal tract has become so popular, that laymen, of their own volition, call upon the roentgenologist for study without previous consultation or direction of the clinician. Unfortunately, the radiologist is indiscreet enough at times to proceed to such examination without complete clinical study, which puts him under the same disadvantage as when the clinician refers a case and does not give the radiologist a clinical history, and his clinical findings.

There is no doubt, in a large percentage of cases, of the exactness of the diagnosis of gall bladder disfunction made by modern technique.

In so far as the tubular portion of the gastro-intestinal tract is concerned, fluoroscopy is equally, if not more, important than the study of plates. During fluoroscopic study, the clinician should be present for the purpose of his own education as well as the corelation of X-ray findings to the clinical picture.

Appendicitis is probably the most common lesion of surgical interest in the gastro-intestinal tract. The diagnosis of chronic inflammatory reaction in this organ, however, is too frequently made. Under the fluoroscope, one may readily determine the localization of tenderness over the caput coli or the appendix itself when pain is localized to that point. We may also, in a large number of cases, deter-

mine the relative position of the appendix in relation to the cecum, and the mobility or fixation of the cecum. In those cases in which no other pathology is demonstrated, such as concomitant gall bladder or gastric diseases, and sometimes calculi of the urinary tract, the surgeon may easily use the muscle splitting incision at the level, localized by fluoroscopic vision, so as not to be embarrassed in the performance of his operation.

I have had the experience on one or two occasions of negative findings on radiologic study of the appendix, and later found it definitely pathological. Occasionally, fluoroscopic examination in the diagnosis of sub-acute or acute appendicitis is indicated, in those cases having grossly atypical findings on physical examination.

I have had one case in which pain and tenderness predominated in the left lower quadrant of the abdomen. In this case, we found, on radiologic examination, that the base of the appendix was in normal position, but the tip was plastered against the sigmoid. In another case, in a man, who had been ill for one week, but who had practically no tenderness on palpation, but only muscle spasm and a small tumor mass; by means of a barium enema, we localized an abscess to the medial side of the cecum. I feel that the importance of my study in this case was the fact that I could come right down upon the abscess directly, through a properly placed incision with as little disturbance as possible of the small bowel, which so unfortunately was surrounding the abscess. It is in those cases in which the small bowel area is involved in infective processes that our mortality is so very high in appendicitis.

The study of the stomach and duodenum with typical filling defects and deformities is pathognomonic in ulcers. However, at this point we must remember the deformities caused by pathology that is not in the tubular tract. I have seen two cases with rather typical ulcer symptoms and typical radiographic defect in the duodenum that were caused by what apparently was a congenital peritoneal fold extending from the fundus of the gall bladder across the duodenum, and blending into the peritoneum of the transverse colon. Both these cases recovered from symptoms on section of this fold.

I have had a number of interesting tumors within the abdomen in which fluoroscopy has been exceedingly helpful. One of these was a mass in the pelvis of a stout woman which, at operation, was found to be a diverticulosis with perforation and abscess formation. It was a very interesting thing to do a pelvic examination under the fluoroscope, to determine by this means, and a barium enema, that the abscess was connected with the intestinal tract.

Another case was that of a stout colored women of about fifty years with a tumor the size of a small grapefruit in the upper left quadrant of the abdomen. We readily determined that the tumor—a carcinomatous cyst, probably of pancreatic origin—was not associated with intestinal pathology, in spite of the picture of obstruction, which she presented on her first admission to the hospital.

There is no class of cases in which radiology is more helpful than in obstruction. Even before the ingestion of barium, or the use of a barium enema, we can readily see the typical distribution of gas indicating small or large intestinal obstruction. If the obstruction is not complete, so that there is time for more careful study, we can frequently locate the exact point of difficulty, as well as determine whether or not it is of extrinsic or intrinsic origin.

In the past few years, I have studied a number of cases of intussusception, fluoroscopically, with the radiologist. It is very easy by this means, with the barium enema, to establish a diagnosis, which may otherwise be very difficult at times in those cases having a very small, non-palpable mass. In one case, we thought it possible to reduce the intussusception, but, after working some time, found that we were unsuccessful. However, if intussusception may be reduced by enemata, it would seem reasonable that we be assured of the reduction by vision.

The typical pictures of diverticulae, tuberculous disease, malignancy and spasticity are well known, and are of great importance in diagnosis.

There is only one other point that I would mention briefly, and that relates to radiologic examination of the central nervous system. I

have had no experience with the use of radio-opaque substances, such as lip-iodol, except in the spinal canal, where, after injection of the substance into the cisternum magnum, we get a readily seen localization in block. I have had a relatively large experience in cerebral radiography, following the method of Dandy in the replacement of cerebro-spinal fluid by air in the cerebral ventricles. Time does not permit of a detailed description of its various phases. Suffice it to say, that it is of great diagnostic value in a large number of cases, but the interpretation must be made by the neurologist or neuro-surgeon in association with the roentgenologist.

In closing, allow me to state that it is my impression that physicians are inclined to look upon the X-ray specialist as a mere artisan or technician. I am further impressed by the fact that the average physician, who is not a roentgenologist, is poorly prepared to assume the liability for technical procedures, nor has he sufficient training or judgment to make his opinion in this special field of work reliable. The physician usually does have, however, a better grasp of the clinical factors in a given case, so that by personal consultation and association with the roentgenologist, in the work to be done, the patient would receive greater benefits than are otherwise obtained. The common custom, to a certain extent the fault of the X-ray man, is that of dictating abstract reports, which may be faulty, because of lack of clinical information on his part, that would alter his perspective of the case.

One thing further should be mentioned. I believe that the roentgenologist, as well as the rest of the profession, due to the amount of mathematics and mechanics involved in X-ray work, tends in too great a degree to make his charges on the basis of purely mechanical factors. This is unalterably opposed to the ethics of our profession, which demand, and in the demand of which even the courts uphold us, to charge the patient in accordance with his ability to pay as well as in relation to the services performed. Unfortunately, I have heard many of my colleagues tell the roentgenologist when they had a poor patient, but I have never heard the roentgenologist told of the fact that he was treating or examining a wealthy patient. I have had patients come into my office and tell me the difference between charges of different laboratories, and attempt to compare the mere number of actual plates made by one or the other. Both the roentgenologists and the clinicians are responsible for the laity's consideration of these charges on the same basis as pounds of potatoes. It should be overcome by education.

Mutual respect and mutual co-operation are necessary.

INTERNAL MEDICINE

J. H. Cannon, M. D., F. A. C. P., Charleston, S. C.

AGRANULOCYTIC ANGINA

Southern Medicine and Surgery, January, 1929

By O. O. Ashworth, M. D., and E. A. Hines, Jr., M. D., St. Elizabeth Hospital, Richmond, Virginia

This excellent article, with the report of three carefully studied cases with a review of the subject to date, emphasized the probability that this condition is more common than one would think. They have summarized the main findings so well in their conclusion that I quote verbatim:

"Comment"

"Since 1924 numerous cases of agranulocytic angina have been reported in the United States and, prior to this time, a dozen cases have been described in Germany. No causative factor has been isolated. Lovett suspects the bacillus pyocyaneus. Morre and Wieder found only Vincent's organisms from throat smears. Skiles thinks the condition may be due to either one of two factors: a specific infection resulting in local necrosis with the formation of a specific toxin for the bone marrow, or a primary affection of the bone marrow resulting in an inhibition of the granulocytic formation, due to lowering of the resistance of the patient. From a review of two cases coming under his own observation and forty-three cases from the literature, George J. Kastlin concludes that the inflammatory sites in agranulocytic angina have wide distribution and, in general, would appear to be due to a secondary infection. Some have suggested a more inclusive nomenclature such a sepis with granulocytic decrease. The main features seem to be ulcerative angina and a great reduction in leucocytes, affecting chiefly the granulocytic series. The onset and course are acute, and the outcome is usually fatal. The characteristic lesions are dirty, ragged, grayish, rapidly spreading ulcers, which may occur on the tonsils, pharynx, gums, tongue, larynx and genitalia.

At autopsy, typical necrotic lesion have been found throughout the gastro-intestinal tract and in the spleen and lymphatic system. The most characteristic lesion is in the bone marrow, which shows an entire absence, or a greatly diminished number of, granulocytes and their procursors, while the lymphoid and red cell elements are slightly if at all reduced. The disease occurs at all ages in both sexes but most commonly in females. The symptoms are usually of sudden onset with throat, neck and joint pain, high fever, chills and malaise, which progress to a severe toxemia and prostration. The onset usually comes in a period of good health, but may follow various chronic conditions. The ulcerative sites show a lack of the usual cellular response of inflammation."

Their three cases answered all the requirements for this diagnosis and the severity of the condition is emphasized by the fact that all three cases died in spite of every thing that could be done.

Note: It is gratifying to note that the junior author is the son of our distinguished Secretary-Editor. Such evidence as this paper speaks well of the calibre of work he is doing, and it is with pardonable pride that we take notice of his efforts and extend justly deserved commendation (Dr. Hines, Jr. is a 1928 graduate of our School).

J. H. C.

EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M. D., F. A. C. S., CHARLESTON, S. C.

NASAL ACCESSORY SINUS INFECTION

By Dr. J. A. Stucky, Eye, Ear, Nose and Throat, March, 1929

It will be difficult in discussing the topic assigned me, to do so, without saying something of the etiology of these infections.

1. It must be borne in mind that the nasal accessory sinuses are primarily air chambers, and the moment their function as such is impaired, discomfort and disease result in proportion to the amount of interference of function.

2. Impairment of the function of the sinuses results in disease and is not primarily a definite pathology, but the interference of ventilation and drainage by partial or complete occulsion of the openings of the sinuses results in a negative pressure of the retained air and sweating and absorption of the natural moisture, and this retained moisture (or secretion), if allowed to remain, becomes purulent. For these reasons the most important thing to do in any condition resulting in impairment or occlusion of the natural openings is to adapt the treatment in such a way as to restore the function of ventilation or drainage without destruction or removal of tissue and with a minimum amount of trauma and irritation.

In active infections of the nasal accessory sinuses which have become purulent, if the nasal space is not kept free by cleanliness and ventilation, the muco-purulent infection is easily transmitted to the middle ear by improper blowing or cleansing of the nose. In this way many of the acute suppurative conditions and even mastoiditis can be accounted for. It is surprising how few people know how to blow their nose properly, and how careless the average medical man is in failing to teach the patient how to perform safely this important act.

What is the cause for the increasing number of nasal accessory sinus diseases and diseases of the eye, ear, nose and throat?

My own clinical observations convince me that primarily involvement of the nasal accessory sinuses is not air borne, except in rare instances.

In the majority of cases the source of the trouble is in some other part of the body, rather than the nasal accessory sinuses, and the symptoms of irritation and infection in the eye, ear, nose and throat are a local manifestation of a systemic condition, which if met promptly and active and vigorous eliminative and alkaline treatment with a non-irritating, antiseptic hypotonic solution used in the nose to cleanse and maintain ventilation and drainage, the large majority of cases will not become seriously involved by suppuration. If, on the other hand, it is true that nasal accessory sinus infections are due to, primarily lowered bodily resistance, what is the cause of the lowered resistance?

It is being daily demonstrated in the laboratory by able research workers, also by clinicians, especially pediatricians and internists, that "diet is the most important factor in establishing bodily resistance to infections. Well nourished, physically efficient persons are seldom sick except for epidemic disease and then the sickness is of short duration and the disease usually mild."

Epstein (1925) reports a number of cases of severe bleeding following the extraction of teeth. The condition being due to the fact that patients had been living on a faulty diet for several years.

Watson, in inspecting diets, where lunches were served at the school, observed that various kinds of cakes and pies were offered. Inquiring the reason he was told that the children brought small sums of money to purchase lunch, that the cakes and pies were cheap and children preferred them to milk, green vegetables, soup and fruits. In one school, pimento sandwiches (made of white bread) were served by the "dietitian," being garnished in a most

attractive way so that they sold like the proverbial "hot cakes." This kind of ignorance and neglect is being practised in most of our schools and colleges all over the land. Principals and presidents seem so occupied with abstract matters of education they have no time to give to the important matter of science of nutrition, thus defeating in its fullness the primary object of a general education and the making of well rounded citizens.

It is now known that rickets may be induced or prevented by any of three ways provided the experimental conditions were suitably chosen in each case. (1) By changes in amounts and proportions of calcium and phosphorus supplied through the blood. (2) By deficiency or inadequacy of ultra-violet, irradiation received from direct sunlight or vapor lamp. (3) By deficiency or abundance of antirachitic vitamins.

Mellanby (1923) shows that puppies fed, during development of permanent teeth, diets deficient in vitamin A, had abnormal permanent teeth and deformity of jaw bones. When these puppies were given diets containing sufficient vitamin A with no other change in diet, the jaw bones and teeth became well calcified and regularly arranged.

McCarrison shows that subminimal provisions of vitamin factors causes impairment of the assimilative, secretory and protective functions and may be etiologic factors in certain pathologic states appearing to be counterparts of those experimentally induced in animals.

Hoobler (Jour. A. M. A., Aug. 4, 1928) says that next to human and cow's milk, sugar and syrups are common articles of diet for infants. Next to these are cereals, most of which are super-milled so that milk with possible addition of sugar or milled cereal with probably some orange juice and cod liver oil is the usual diet of infants in the United States for at least the first three months, and when these are analyzed for vitamin content A., C., and D., are found, but B. only in limited amounts, in the milk and orange juice. Where then shall we get the necessary amount of vitamin B.?

Daniels and Dean (Iowa University) have found that the nasal accessory sinus diseases, as well as enlarged tonsils and adenoids and middle ear and mastoid infection, are due to deficient nutrition, and upon feeding a balanced diet, the sinus and ear trouble are relieved. The same kind of sinus, middle ear and mastoid infection was caused in rats and guinea pigs by deficient diet as occurred in the human, and post mortem examinations show it to be the same type of infection found in the children and adults using deficient diets. Eyermann (Jour. A. M. A., Aug. 4, 1928) reports an interesting number of cases of food allergy causing nasal symptoms, as vasomotor rhinitis, due to foods—dietary—or plants by inhalation.

Prof. Hopkins, quoted by Dupain, 1920, was impressed by conduct of students in a large preparatory school in England. During the winter term the conduct was unsatisfactory, standards of play and work fell below normal, boys became listless, irritable, etc. Throats examined and other hygenic measures instituted, but nothing came of it. Then the diet was looked into, and it was found that they were receiving no uncooked foods, fruits, or greens. When these were added to diet, no further trouble. They had been suffering from incipient scurvy, due to lack of vitamin C. Relieved by changing the diet. My observations and clinical conclusions agree with those quoted.

Increased knowledge brings increased responsibility.

Among the most recent additions and most important have been physiological and biological chemistry. These, in turn, have become incorporated into the science of nutrition, and it is developments in this science that we must diligently follow, for regardless of what branch of medicine we practice, these two conditions, growth and development, must always remain subjects of our concern.

Recently we have learned much about circumstances and conditions under which infection takes place, and we may arrange diet as to determine the kind of infection to which persons are subject. "This has brought us to the parting of the ways where we must determine whether we shall be content to treat defects and endresults by mechanical methods or whether we shall prevent and treat them in accordance with the newer scientific practitioner." Dietary deficiency to interfere with normal growth and development reacts unfavorable,

often destructively, upon the organs of special sense.

We should take the attitude of tempering enthusiasm with judgment and of waiting for sound and valid demonstration before we become unduly excited over new discoveries, but there is much in the interrelationship between nutrition and growth as it is influenced by diet, much that has been proven and on that firm foundation we should build the health walls that will keep out disease and assist us in curing the disease that is in the body.

ANNUAL CONFERENCE OF THE SOUTH CAROLINA SOCIETY FOR MENTAL HYGIENE. MAY 17th, 18th, 1929, CHARLESTON, S. C.

All meetings at the Francis Marion Hotel

General Subject:

The Mental Health of the Community.

Opening Session:

Friday, May 17, at 8 P. M.

Business meeting of the Society for Mental Hygiene.

General Sessions:

Saturday, May 18, at 11 A. M.

Dr. Sylvia Allen, President of the Society, presiding.

Address of Welcome.

Response:

Dr. E. L. Horger, South Carolina State Hospital.

Mental Hygiene, a Public Health Measure.

Dr. George K. Pratt, Assistant Medical Director, National Committee for Mental Hygiene.

Mental Hygiene in the Public Schools.

Mr. George C. Rogers, Principal of Courtney School, Charleston, S. C.

Mental Hygiene in the Practice of Medicine.

Dr. Heyward Gibbes, Columbia, S. C.

At 1 P. M. Luncheon at Francis Marion Hotel. ($1.25 per plate).

Statement of the work of the society.

At 3:30 P. M.

Session sponsored by the Social Worker's Club.

Mr. George E. Grimball, presiding.

Cooperative Case Work.

Dr. George S. Stevenson, Director Division on Community Clinics, National Committee for Mental Hygiene.

Discussion of Dr. Stevenson's paper by:

Miss Ethel Sharp, psychiatric Social worker for South Carolina State Hospital.

Miss Agnes Smart, psychiatric Social worker for the Mental Hygiene Clinic of Charleston.

The Defendant, the Court and the Clinic.

(Speaker undetermined).

At 8 P. M.

Session sponsored by the Parent-Teacher Association of Charleston, S. C.

Dr. Robert Wilson, Jr., presiding.

The Health of the normal child.

Dr. George K. Pratt.

The Child Guidance Clinic.

Dr. George S. Stevenson.

SOCIETY REPORTS

OCONEE COUNTY MEDICAL SOCIETY

The Oconee County Medical Society met in the attractive rooms of the County Health Department at Walhalla, 3:30 P. M., March 22. Dr. T. G. Hall, President, was in the chair and a large number of the members answered to roll call. Routine business was dispensed with and the time given over entirely to the distinguished guests from Greenville and Clemson College.

Dr. R. C. Bruce, of Greenville, Councilor of the Fourth District, was present in his official capacity and warmly congratulated the Society on the excellent programs and splendid average attendance each year and the fact that the Society throughout its entire existence had been able to maintain the unusual record of having every eligible physician on the roll of the Society. Dr. Bruce presented an admirable paper on Lipoid Nephrosis.

Dr. R. M. Pollitzer, of Greenville, brought a splendid practical message on the subject of Serum Sickness.

Dr. Lee Milford, Surgeon at Clemson College, presented slides showing the technique and general procedures of the newer methods of making physical examinations of the cadets at Clemson. It will be recalled that the President of the State Medical Association made favorable mention of this work before the House of Delegates at the Columbia meeting.

Many members of the Society joined in the discussion of these addresses. It is worthy of note that although the weather conditions were very unfavorable the interest in attendance dis-

closed the usual loyalty of the membership in making the meeting one of the most successful of the year.

E. A. Hines, M. D., Secretary.

MEETING YORK COUNTY MEDICAL SOCIETY, ROCK HILL, S. C., MARCH 13, 1929.

The meeting was called to order by the President, Dr. Norma P. Dunning, with the following doctors present; Drs. W. R. Blackmon, J. L. Bundy, Norma P. Dunning, J. R. Des Portes, J. B. Elliott, E. E. Herlong, J. R. Miller, W. K. McGill, R. E. Sumner, W. F. Strait, W. C. Twitty, W. E. Simpson, D. E. Walker, W. B. Ward, W. G. Stevens. Dr. Gaston of Chester County was a visitor for the occasion.

The President appointed the following Program Committee; Dr. W. C. Whitesides, Chairman, Dr. Norma P. Dunning, Dr. E. E. Herlong and Dr. W. K. McGill.

The time of the meetings was changed from 11 A. M. to 8 P. M.

Dr. J. R. Des Portes brought up the matter of the reorganization of the Fifth District Medical Society at Chester on March 26, 1929, urging all who could to be present and lend their support to such a reorganization.

Dr. E. E. Herlong presented an interesting paper on "Some of the Most Common Kidney Infections." He first showed how the conditions interested both internists and specialists the nose and throat group possibly least while the general surgeon will likely be troubled most with the vague signs that arise from gall bladders, appendics and salphingitis. Just the other day a case was referred into hospital diagnosed appendicitis which upon urological examination proved to be pyelitis of pregnancy of right kidney only, explained by anatomical position hence worse drainage and a more liberal lymphatic drainage Another instance I recall where a telephone call came to have operating room set up for an appendictomy which upon X-Ray examination showed stone in Right ureter. It was cystoscoped, the stone passed and patient cured of appendicitis without an operation. Here urine was negative because tube was totally blocked.

Dr. Whitesides in discussing the possibility of an error in diagnosis said that he had to confess to such a mistake as Dr. Herlong had just cited.

Dr. Dunning discussed a certain type of young college girls that she had to deal with who had lower quadrant, colicky pains in which the question of kidney infections had to be decided. She has found a great number of these to be cleared up by simply forcing fluids.

Dr. Ward discussed a case that he first diagnosed appendicitis which suddenly showed signs of a pelvic abscess, a four plus pus in urine. Then he thought he had possibly a pyelitis but there was a mass in region of appendix to explain. Upon operating later there was an abscess that adhered to urinary bladder. The pus must have gotten into the urinary track either through lymphatics or by direct invasion for it cleared up after getting out abscess.

Dr. Bundy discussed the early and late signs, the pathology, the distribution of pellagra, the past and present attributed cause of the disease together with the best recognized treatments.

Dr. Whitesides stated that the disease was among those who were least able to pay for the treatment both of drugs and the high protein diet. That he had seen more pellagrins last season than any previous season in his practice.

Dr. D. E. Walker said he had found the Brewer's yeast helpful in treating pellagra also he likes Fowler's solution.

Dr. Frank Strait stated that many of his pellagrins had constipation rather than diarrhea. This class he found to respond to Brewer's yeast well.

Dr. Ward discussed the type of patients without the manifest signs of pellagra that are sometimes operated upon for kidney infections or appendicitis through mistakes and suddenly flares up with all signs of pellagra.

Dr. Simpson reminded us that Dr. McConell. of our County, was the first one who recognized and published a case of pellagra in U. S. A. Dr. Simpson drew a parallism between open sewage and pellagra, that where one was the other was also more prevalent.

Dr. McGill discussed cases treated with three whole doses of their serum obtained from a (fly blister) cautheridis and injected into their veins. Patients thus treated for past two seasons showed no recurrence. These patients were also given twenty drops dilute hydrochloric acid with meals. He stated that in the same length of time pellagrins treated with the usual drugs and diet had had recurrences.

W. K. McGill, M. D., Secretary-Treasurer.

REGULAR MONTHLY MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY, HELD AT THE IMPERIAL HOTEL, MONDAY, MARCH 4, 1928.

The meeting was called to order at 8:15 P. M., by the President, Dr. J. G. Murray, with about forty members present. The minutes of the last meeting were read and approved with Dr. Evatt's correction.

Reports of clinical cases were then called for. Dr. Davis reported an interesting case of five diverticula occurring in the urinary bladder of one of his female patients. He also reported two

cases of prostatic abscess treated with the Stearn's resectoscope in which haemorrhage was controlled with an instrument of his own invention.

Dr. Evatt reported briefly on his series of patients whom he had treated for various infections with the intramuscular injection of dilute hydrochloric acid. Dr. Evatt's report was favorable although he mentioned that reactions are likely to occur. Dr. Davis also reported favorable results with this therapy.

There being no further clinical cases, the President then called upon Dr. Geo. T. Tyler, who gave a very able discussion on spinal injuries. He first stated that the subject of spinal injuries is one of increasing interest owing to the high death rates and disappointing results incident thereto. Spinal injuries are very commonly met with in war surgery as one would presume, and the case history of a divided cord was given with recovery following suture, this patient being one of Cadwalader's series. Dr. Tyler then stated that the troublesome effects of spinal injury were due to the compression myelitis suggested by Dowman and Smith. On account of the possibility of damage to the cord through pressure which is very likely to follow. Dr. Tyler stated that early laminectomy should be resorted to in order that this might be avoided. Allen found the best results to come from the exposure of the dura at operation, then splitting the cord to expose the canal. He reported earlier recovery following the procedure. The purpose of this operation being, of course, to combat swelling and thus prevent spinal cord damage from pressure.

Dr. Tyler then presented one of his patients whom he had treated following an injury to the lumbar cord as the result of an automobile accident. Discussed by Dr. J. Warren White; closed by Dr. Tyler.

The President then called upon Dr. DeWitt Kluttz, who discussed in a very thorough manner the subject of Lipoid Nephrosis. Dr. Kluttz exhibited a patient and presented his subject in this manner. This patient gave a 4-plus albuminuria, and practically no phenol-sulphonephthalein output. Fifty per cent of this albuminuria was due to the presence of globulin. Dr. Klutz then stated that there was seldom any change in the non-protein nitrogen of the blood; creatinin content is normal. There is a slight increase in the sodium chloride content of the blood, but no increase in blood pressure. Oedema comes late in the course of the disease and with this oedema comes a high protein content in the tissues and a low protein content in the blood. The hydrogen ion concentration of the blood is irrelevant. In Dr. Kluttz' patient albuminuria was first noted in 1924. Some improvement in the patient's subjective symptoms have been noted, and he feels better following exercise. Mosenthal and concentration tests are now normal. Bilateral ureteral catheterizations reveal the presence of epithelial cells loaded with fatty deposits. There is also the presence of free fat in this urine. As to the cause of Lipoid Nephrosis, Dr. Kluttz stated that he thought it may be due to the faulty metabolism of protein; low metabolism may be a cause in that thyroid extract administration is efficacious. Discussed by Drs. Bruce, Davis, Hugh Smith, W. S. Fewell, Tyler, Murray. Closed by Dr. Kluttz.

Under the heading of Reports of Committees, Dr. Bruce, who had been appointed as Chairman of a Committee to interview City Council regarding the decrease of physicians' license fees reported that the members of the Council desired the Medical Society to submit to that body just what the Society thought these fees should be. Dr. Wilkinson moved that this Committee be continued; seconded by Dr. Evatt and carried. This matter was discussed by Drs. Davis, Bruce and Brown.

Dr. Davis brought up a matter regarding the proposed increase in tariff on imported surgical instruments, and after some discussion moved that the Secretary write the Chairman of the Ways and Means Committee and to the Hon. J. J. McSwain, Congressman from South Carolina in protest of the passage of this proposed measure; seconded and carried.

It was then moved, seconded and carried that the Secretary write a letter of sympathy to Dr. Humphrey D. Wolfe following the death of his father; also that a letter of condolence be written to Dr. Isaac H. Grimball on account of an illness which had required a major operation.

There being no further business, the meeting adjourned.

Irving S. Barksdale, M. D., Secretary.

MEETING OF THE FIFTH DISTRICT MEDICAL SOCIETY, CHESTER, S. C., MARCH 26, 1929, ELEVEN OCLOCK A. M., SHRINE CLUB.

Invocation—By Reverend J. O. Mann, Pastor Purity Presbyterian Church, Chester, S. C.

Address of Welcome—By Dr. R. E. Abell, President Chester County Medical Society, Chester, S. C.

Scientific Program

Address by Dr. R. E. Hughes, Laurens, S. C., President South Carolina Medical Association.

A Plea for a More Thorough Systematic Examination of All Patients—By Dr. S. E. Harmon, Chairman of the Council, South Carolina Medical Association, Columbia, S. C.

Some Remarks on Malta Fever in South Carolina—By Dr. E. A. Hines, Secretary-Editor South Carolina Medical Association, Seneca, S. C.

Influenza—Observations of Over 600 Cases—By Dr. Norma P. Dunning, Resident Physician Winthrop College, Rock Hill, S. C.

Discussion opened by Drs. W. E. Simpson, Rock Hill, S. C., and W. C. Whitesides, York, S. C.

Some Cases of Intestinal Obstruction—By Dr. W. B. Ward, Chief Surgeon Fennel Infirmary, Rock Hill, S. C.

Discussion opened by Drs. Roy E. Sumner, Rock Hill, S. C., and R. E. Abell, Chester, S. C.

THE UROLOGICAL ASSOCIATION OF SOUTH CAROLINA, GREENVILLE, S. C., MARCH 26, 1929.

A clinic demonstrating "Resection of the Prostate Gland" by Dr. T. M. Davis.

Programme

Meeting called to order promptly at 6:30 P. M.

BANQUET

"Gunshot Wounds of the Urinary Tract"—Dr. M. H. Wyman, Columbia, S. C.

"Sterility in the Male"—By our invited guest—Dr. Francis R. Hagner, Washington, D. C.

"Gonorrhoeal Septicemia and Arthritis"—Dr. E. E. Herlong, Rock Hill, S. C.

Report of Clinical Cases.

J. J. Ravenel, M. D., President,
Charleston, S. C.
Hugh E. Wyman, M. D.,
Secretary-Treasurer.
Columbia, S. C.

DR. JOSEPH GOLDBERGER

WHEREAS, the Spartanburg County Medical Society learns of the recent death of Dr. Joseph Goldberger, of the United States Public Health Service, with a realization of the loss sustained in his passing; and

WHEREAS, members of this society were privileged to be associated with him in the study of Pellagra, conducted by him as the representative of the United States Public Health Service in this section of the South; therefore, be it

RESOLVED, That we record our recognition of the eminent service Dr. Goldberger rendered the cause of scientific medicine through his able research, the announcement of his conclusions and the practice of his methods to the relief of human suffering; and be it further

RESOLVED, That the United States Public Health Service be apprised, through these Resolutions, of the high esteem in which he was held by the members of this Society, and of their recognition of his fine example and distinguished service to the medical profession.

Geo. E. Thompson, M. D.,
James L. Jeffries, M. D.,
J. J. Lindsay, M. D.,
Committee.

DR. WILLIAM A. WALLACE

RESOLVED, That we, the Spartanburg County Medical Society, extend to his family our heartfelt sympathies in their sorrow and great bereavement.

That we share with them the burden of grief and sorrow entailed by his passing in the very prime of life and proficiency.

That we, as well as his family and patients, have profited by his pleasing personality and companionship and from his efforts so earnestly and practically applied in behalf of those whom he served.

That, as a physician, he was painstaking, accurate and efficient and his work among us has been appreciated as creditable and a distinct gain in the practice of medicine.

Geo. E. Thompson, M. D.,
James L. Jeffries, M. D.,
J. J. Lindsay, M. D.,
Committee.

SPARTANBURG COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Spartanburg County Medical Society was held Friday night, February 22nd at 8 P. M., at the Spartanburg General Hospital.

The minutes of the last meeting were read and approved.

Dr. J. Warren White of the Shrine Hospital at Greenville, read a very instructive paper entitled, "Orthopedic Objectives".

Dr. Long, of the State Hospital, another guest of the society, read a paper entitled, "The Mental Aspects of Pellagra".

Dr. Kleinschmidt of the National Tuberculosis Association was also present as a guest of the society. Dr. Kleinschmidt stated that the association believed that the campaign conducted last year to educate the public concerning the early symptoms of tuberculosis had done much good and that another campaign was to be conducted this Spring.

Dr. Kleinschmidt then made the following remarks: "In children the tuberculosis infection first produces a nodule in the parenchyma of the lung and then travels via the lymphatics to the glands at the hilus region of the lung. Tuberculosis in adults is nearly always due to reinfection. Heliotherapy is very beneficial in bone and joint tuberculosis and is being tried out in pulmonary tuberculosis, but one has to be cautious

in the use of heliotherapy in this type of tuberculosis as a dormant pulmonary tuberculosis may be made active by too much ultraviolet or sunlight, and the sale of ultraviolet lights to patients is not safe. The new glass which is still being advertised is also of very little value, because a patient may walk out doors for a few minutes and receive as much ultraviolet light as he does sitting for hours near a window with this new glass.

"Intimate contact is usually necessary and a history of contact is very important. Every member of the family should be examined. Tuberculosis is nine times more common in children where there is an open case of tuberculosis in the home. Five per cent of all school children are infected with tuberculosis. The preventorium has been found of value in combating tuberculosis in children. The most important function of the sanitorium is to prevent the spread of tuberculosis. The patient learns among other things not to spit on the floor and not to kiss babies. Since the war the death rate from tuberculosis has declined in all age groups except in young adults between 15 and 25. Only 16% of patients with tuberculosis are in the early stages of the disease when first examined. A new institution has been started to teach arrested cases new trades which requires less physical effort. Calmette's vaccine (a non-virulent strain of tubercle bacilli) has not yet been proved of definite value, because Calmette not only vaccinates, but also takes the patient away from others infected with tuberculosis."

Dr. Bennett moved that the Secretary write the members of the legislature and the Board of Trustees of the General Hospital calling attention to the immediate need of a colored hospital as the conditions at the present colored hospitals were intolerable.

Dr. Bennett also moved that Section 2 of Chapter V of the By-Laws be enforced and that all members be notified.

There being no further business the Society adjourned.

S. O. Black, President,
W. M. Sheridan, Secretary.

APPRECIATION OF SIMS

March 4, 1929.

Dr. E. A. Hines,
Seneca, S. C.
Dear Dr. Hines:

Please forward my small contribution to the Sims Memorial. It has been my intention to contribute something to this all the time, but it has been overlooked. I trust the gift will be accepted more in spirit than it can amount to in material worth.

I have read, with unusual interest, the life and letters of J. Marion Simms, as well as the comments of some Biographers.

With personal good wishes to you, I am

Sincerely yours,

OLM/b O. L. Miller, M. D.

DEATH OF DR. B. F. GOODLETT

In the death of Dr. B. F. Goodlett of Travelers Rest the Greenville County Medical Society and the South Carolina Medical Association lose a member whose service to suffering humanity had the extra-ordinary span of fifty years. Dr. Goodlett was one of the oldest surviving graduates of the Medical College of the State of South Carolina. He was not only a good doctor but a citizen highly esteemed in the community in which he lived for his interest in the worthwhile things outside of medicine.

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PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL, TUESDAY EVENING, MARCH 12TH, 1929, AT 8:30 O'CLOCK.

The meeting was called to order by the President, Dr. Henry P. Jackson.

Present: Doctors: Allen, Beach, Bowers, Burn, Byrnes, Cain, Chamberlain, Deas, Jackson, F. B. Johnson, Kollock, McCrady, Martin, Mitchell, Mood, O'Driscoll, F. R. Price, Priouleau, W. P. Rhett, Richards, Rutledge, J. E. Smith, W. A. Smith, Speissegger, Taft, Townsend, Waring, R. Wilson. (28).

Guests: Dr. Arthur Gerhardt, of Philadelphia, Dr. R. H. Lanning, U. S. N. internes, and senior medical students.

The minutes of the meeting of February 26th were read and confirmed.

The Secretary read a letter from Dr. J. H. Oakley of the United States Public Health Service, thanking the Society for its action in the matter of the bill before Congress to provide a pension for Mary H. Goldberger. The Secretary also read letters from Senator Cole L. Blease and Senator E. D. Smith, in which they stated that they were in favor of the bill to provide a pension for Mrs. Goldberger, and that the bill had passed.

The Secretary read a letter from one of the committee of the League of Hard of Hearing, in which the Society was thanked for its action in appointing a committee to assist the ladies of this League and pointed out that as the members of this Society were "all very busy men it may be more desirable to you and most acceptable to the League if your aid comes in the form of a money donation."

The Secretary read a letter from the Clerk of Council, Mr. Joseph C. Barbot, calling attention to the revision made in the city ordinance establishing a Board of Health and a Board of Welfare. This letter pointed out that the ordinance for the establishment of the Board of Health provided that the Medical Society of South Carolina shall recommend a member for appointment on this Board, and desired to know if Dr. W. M. Rhett, nominated by this Society for the old Board, was agreeable for nomination to the new Board. It was moved by Dr. Mood that this Society nominate Dr. Wythe M. Rhett for appointment to membership on the Board of Health. This was seconded and carried.

Under Miscellaneous Business, Dr. Robert Wilson stated that the Society for the Preservation of Spirituals had been invited to participate in the Musical Festival in Boston, and that they would give an entertainment soon for the purpose of raising funds to defray the expenses of this trip. He said that he had been requested by the Spiritual Society to make this announcement.

The Scientific Meeting was called at 9:00 P. M.

Under Case Reports, Dr. W. A. Smith reported a case of purulent infection of the right antrum, causing facial neuritis on the left. Drainage of this sinus cured the nuritis.

Dr. Henry Deas reported a case of caesarian section performed on a woman who had been crippled for life and never able to walk.

Dr. J. E. Smith reported a case of a small metallic foreign body which had penetrated the eye without showing external evidence. The failure of the magnet to remove this body necessitated enucleation of the eye.

Dr. C. W. Kollock reported a pistol wound of the eye which had resulted in a perfect iridectonemy. A traumatic cataract subsequently developed.

Dr. R. B. Rhett reported two cases of retinitis.

The paper of the evening was read by Dr. J. F. Townsend on "Eye Grounds". Dr. Townsend showed lantern slides illustrating the various lesions of the eye grounds occurring in different types of cardio-vascular renal disease. This was discussed by Dr. C. W. Kollock, who also used lantern slides to illustrate the points he wished to emphasize. The paper was further discussed by Doctors F. B. Johnson, R. Wilson, Rutledge, Cannon and Dr. F. R. Price, Dr. Townsend closing.

There being no further business, the meeting adjourned.

W. Atmar Smith, M. D., Secretary.

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BOOK REVIEWS

A DOCTOR'S LETTERS TO EXPECTANT PARENTS—Frank Howard Richardson, M. D., F. A. C. P. Price, $1.75. Pp. 118. New York: Children; The Parents Magazine, and W. W. Norton & Company, Inc., 1929. This unique little book contains eighteen letters which deal with a variety of important subjects. The father as well as the mother is addressed, for he is shown that he too has responsibilities and duties. While necessarily the physical side of the mother's life during pregnancy is fully discussed, yet much attention is directed to her mental and emotional needs. Quite a bit of wholesome philosophy will be found in some of the letters. Dr. Richardson in his inimitable way has with frankness charmingly outlined what parents should know before the advent of the baby. It differs from numerous popular books on ante-natal care in that while medically correct, yet it neither goes into emotional gushes nor overwhelms one with undue pessimism. Essentially it is a well written, honest exposition by one who has knowledge. The presswork is excellent.

R. M. Pollitzer, M. D., Greenville, S. C.

RECENT ADVANCES IN CHEMISTRY, IN RELATION TO MEDICAL PRACTICE—By W. McKim Marriott, B. S., M. D. Price, $2.50. Pp. 141. The C. V. Mosby Company—St. Louis, 1928. The day of looking at the tongue of a patient and then prescribing for him, has almost entirely gone. Furthermore while formerly medicine was an edifice built on a fairly solid foundation of anatomy, physiology and pathology; today we are forced to recognize that without the addition of physiological chemistry there is a marked weakness. Few men who practice unless newly hatched from a medical school or they have had unusual scientific training, possess but a vague idea of the relation of chemistry to medicine. To the internist and the general practitioner, as well as to the pediatrician much of the material in this little book will be very helpful. The nature of acidosis, and alkalosis, and what factors produce them are clearly elucidated. The chapter on the chemistry of the blood is well worth reading. There is nothing super-scientific about the book. It is really practical, and contains much that will be rather new to most readers.

R. M. Pollitzer, M. D., Greenville, S. C.

ANGINA PECTORIS—By Harlow Brooks, M. D., Emeritus Professor of Clinical Medicine, New York University, Visiting Physician, City Hospital; Consulting Physician, Fifth Avenue, French, Polyclinic, Montefiore, Norwegian and Beth Israel Hospitals, New York City; Colonel, Medical Reserve, U. S. A., etc. Harper and Brothers, Publishers, New York and London, MCMXXIX. The author of this volume writes from personal experience in New York's largest hospitals. The book is not a review of the literature already published but is a thorough study of the subject from the consulting physician's viewpoint. Dr. Brooks lays particular stress on the treatments which should be given in these cases and under certain conditions. These new publications in the Harper Medical Monographs are attractively priced, compact in form and authoritative, designed to give the general practitioner a complete and up-to-date library on individual diseases, methods of treatment, etc. The advisory editorial board for this series includes a group of eminent authorities in the medical profession. This series should be of great value to physicians who now find it difficult to keep abreast of the latest developments because of the size and complexity of the literature, and the expensiveness and bulk of the average medical book.

SPINAL ANESTHESIA—Subarachnoid Radicular Conduction Block—PRINCIPLES AND TCHNIQUE—By Charles H. Evans, M. D., Clinical Assistant, N. Y., Post Graduate Medical School and Hospital. Lying-In-Hospital of the City of N. Y.; Assistant Surgeon, N. J. Orthopedic Hospital, Orange. Introduction by W. Wayne Babcock, M. D., F. A. C. S. Foreword by Charles Gordon Heyd, M. D., F. A. C. S. 41 Illustrations, 3 in color. One Folding Colored Plate. Paul B. Hoeber, Inc., New York, MCMXXIX. One of the outstanding achievements of modern surgery is that of concentrated research in the domain of anesthetics. American surgeons have in recent years given much closer attention to various forms of local anesthesia. A fascinating advance is that of spinal anesthesia. The book under discussion an admirable contribution clear cut with splendid illustrations and yet sufficiently comprehensive for all practical purposes.

INJECTION TREATMENT OF INTERNAL HEMORRHOIDS—By Marion C. Pruitt, M. D., L. R. C. P., S. (Ed.) F. R. C. S., (Ed.) F. A. C.

S. Associate in Surgery, Medical Department, Emory University, Georgia Baptist Hospital and Grady Hospital; Protologist, Davis Fischer Sanitarium and Anti-Tuberculosis Association; Formerly Resident Surgeon, Westminster Hospital, London, England; Lieutenant, Temporary and Honorary Commission, R. A. M. C.; Major, U. S. M. C. Illustrated. St. Louis, The C. B. Mosby Company, 1929. We are keenly interested in a growing tendency toward the publication of medical books by Southern men. This little manual emphasizes an almost universal malady with one of the simpler methods of treatment outlined.

THE TECHNIQUE OF LOCAL ANESTHESIA—By Arthur E. Hertzler, A. M., M. D., PhD., LL.D., F. A. C. C. Professor of Surgery in the University of Kansas; Surgeon to the Halstead Hospital, Halstead, Kansas; To St. Lukes Hospital and St. Mary's Hospital, Kansas City, Missouri; And to the Providence Hospital, Kansas City, Kansas. Fourth Edition. With 146 Illustrations. St. Louis, The C. V. Mosby Company, 1929. This volume covers a wide range of surgical practice and gives minute instructions on the whole field of local anesthesia.

IMPERATIVE TRAUMATIC SURGERY—With Special Reference to AFTER CARE AND PROGNOSIS—By C. R. G. Forrester, M. D., F. A. C. S. Consultant, Teaching Staff, Illinois Post Graduate School, Laboratory of Surgical Technique, Chicago, Consulting Staff, Chicago General, and Rogers Park Hospitals, Attending Staff, West Side, Lutheran Memorial, and West Suburban Hospitals, Chicago. Five Hundred and Ninety Eight Illustrations. Paul B. Hoeber, Inc., New York, MCMXXIX. This is perhaps the most exhaustive treatise in a single volume monographed hitherto published in this country. The author has had twenty-six years' experience to draw upon and gives the reader the benefit of definite procedures he has found to be best.

THE SURGICAL CLINICS OF NORTH AMERICA (Mayo Clinic Number)—(Issued serially, one number every other month.) Volume 9, No. 1. (Mayo Clinic Number—February, 1929) 247 pages with 141 illustrations. Per clinic year (February, 1929 to December, 1929). Paper, $12.00; Cloth, $16.00. Philadelphia and London. W. B. Saunders Co.

THE INFANT AND YOUNG CHILD (Second Edition, Revised)—Its care and feeding from birth until school age. A manual for Mothers. By John Lovett Morse, M. D., Edwin T. Wyman, M. D., and Lewis Webb Hill, M. D., of Harvard Medical School and Children's Hospital, Boston, Mass. 12mo. of 299 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1929. Cloth, $2.00 net.

MEDICAL CLINICS OF NORTH AMERICA (Philadelphia number—January, 1929). (Issued serially, one number every other month.) Volume 12, Number 4. (Philadelphia Number, January, 1929). Octavo of 297 pages with 30 illustrations. Per Clinic year, July, 1928 to May, 1929. Paper, $12.00; Cloth, $16.00 Net. Philadelphia and London: W. B. Saunders Company, 1929.



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OF THE

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EDITORIAL

PRESIDENT C. R. MAY

An extended writeup of Dr. C. R. May, of Bennettsville, will appear in a later issue but at this time we wish to call attention to the well deserved honor accorded to one of the loyal and hard working members of the State Medical Association whose election has been received with pleasure throughout the State. Dr. May served a long apprenticeship on the Council and in many other ways has shown his loyalty to the South Carolina Medical Association. Dr. May has a very pleasing personality and is popular not only in his home community but in a much wider circle. He will make a worthy leader and head of the medical profession for the coming year. Dr. May will be able to personally visit a number of the Societies during his term of office and thus by close contact give to them the benefit of his long experience and successful leadership in his own section of the State.

THE UNVEILED SIMS MEMORIAL

One of the most inspiring exercises ever held by the South Carolina Medical Association was that of the unveiling of the completed Sims Memorial on the State House grounds, Columbia, May 10. The joint participation under the leadership of the Woman's Auxiliary to the State Medical Association and the State of South Carolina assured a wisely carried out program. The memorial is a masterpiece, the work of artists of unquestioned ability. It will stand for all time as a tribute to one of South Carolina's most lauded sons. The good judgment of the committees having charge of the details of the building of this Memorial deserves hearty commendation. The financial consideration was about six thousand dollars. The completed Memorial has been provided, therefore, for a reasonable sum and the ideas of those most active in designing the same carried out to full fruition. The plans of the

Memorial Committee calls for the publication in phamphlet form of the history of the movement to erect the Memorial including all of the details with a financial statement, the names of the donors, the names of the committees, proper photographs of the Memorial, etc. The Journal, therefore, will not publish in full all of the data as it can be much better done by the special committee in charge. The following address was delivered by President R. E. Hughes at the time of the unveiling:

"The South Carolina Medical Society has cause to be the proudest organization of its kind in the world today in accepting this handsome Memorial and thus paying tribute to the Earth's greatest Physician and distinguished Carolinian.

"One whom present and future generations of physicians and surgeons will ever be markedly indebted and one to whom all womankind should be grateful.

"If you will pardon the personal reference and the pride that goes with it, I am very happy that accident or very kind fate may be the charity of my colleagues, gives me the opportunity of accepting this gift—an idea conceived by two late eminent Carolina doctors, S. C. Baker and H. M. Stucky, of Sumter, personal friends, and brought to a realization by the untiring work of the Woman's Auxiliary of the Medical Society, headed by Mrs. H. M. Stuckey's persistent efforts and such a marked and signal service, that in her report to the Charleston meeting, and her plea that the work was finished, she was not only thanked by a unanimous standing vote, but retained to hold this great work for anything further necessary.

"Therefore the work of friends, I in turn bequeath it to the State of South Carolina, whose Executive head is also a personal friend, in the hands of his Excellency, Gov. Jno. G. Richards. We feel the best memories will be cherished, because worth appreciates worth. So reverently, affectionately and sincerely, God bless Mrs. Stucky, our State and our Government."

COMMENTS ON THE CHARLESTON MEETING

The eighty first annual session of the State Medical Association, according to reports received from various sections of the State considering the varied interests involved, was a good meeting. The social contacts were gloriously successful and enjoyable.

The clinics were well attended and certainly won admiration from many of the best men in the State.

The Scientific Program covered a wide range of subjects but it must be admitted that on the last afternoon the attendance was small. Perhaps there is no way to assure a very large attendance in the closing hours. Many plans have been resorted to without complete success as yet. Nevertheless, there are always a faithful few who remain until the gavel falls. These must be interested and find it worthwhile to resist the temptation to leave when the larger crowd goes.

It is certain that when the Association meets in Charleston the opportunity for the renewal of old friendships, the visitation of the Medical School and other institutions from which many of the physicians of the State graduated cannot be duplicated elsewhere. This, is a very important factor in keeping the State Medical Association alive to the historic background of its organization in 1848.

Much was accomplished at the Charleston meeting this time. The House of Delegates had a long and somewhat tiresome session but action was taken looking toward a much more efficient organization and greater service on the part of the Association to the State. For instance, the By-Laws were amended so that the standing committees of the House will be much simplified and the time of hearing these reports in the future should be greatly shortened. Also, the proposition by the Committee on Constitution and By-Laws to be voted on next year that we have a Speaker of the House to be elected annually and a President Elect instead of three Vice-Presidents if adopted should add tremendously to the effective working of the Executive machinery of the State Medical Association.

One of the important subjects brought to

the attention of the profession was that of the iodine content of the food products of the State. It was entirely fitting that such a problem with its vast possibilities should be brought squarely before the medical profession for it will depend for its greatest success upon the approval of medical men.

The invasion of the State by Malta Fever brought forth interesting discussions and thus this new disease will be investigated from the mountains to the sea in the near future.

The final report of the Woman's Auxiliary on the completion of the Sims Memorial after more than twenty years from the inception of the idea marked an epoch in historic medicine in South Carolina.

In the domain of public health the program of the South Carolina Public Health Association proved to be highly interesting and illuminating. The attendance was large.

One other public health matter which deserves continued support was that of the Committee on Health and Public Instruction, to memorialize the Legislature for an appropriation of about twenty-five thousand dollars to establish a Bureau of Publicity under the direction of the State Board of Health.

The scientific exhibits were by far the largest ever provided by the Association. They were of national scope.

The commercial exhibits were good but not as numerous as had been hoped for.

The Wednesday night meeting to which the public had received invitations had a good attendance and the film on cancer put on by the State Cancer Committee was of extraordinary interest. There were many clinicians present who had traveled widely and expressed themselves freely that they had never seen such a wonderful demonstration of a scientific film.

The hotel facilities were entirely adequate and satisfactory.

The work of the various committees in charge of local arrangement left nothing to be desired on the part of anyone.

The attendance all told, including visitors, public health workers, doctors and their wives and daughters, reached a total of about five hundred. This is considered to be very good in proportion to the membership of the State Association.

The report of the Secretary disclosed a slight falling off in the total enrollment at the close of the fiscal year December 31, but at the time of the meeting in Charleston more suspended societies had been reinstated and more members had paid their dues.

The report of the Councilors indicated a wide-spread interest in both organized medicine and scientific progress so that the administration of Dr. R. E. Hughes, President, evidenced continued growth of the Association and a degree of harmony perhaps more noticeable than ever before.

The decision to meet at Florence next year by a very decisive vote was ample testimony to the conviction that the Pee Dee section will measure up to its famous tradition for splendid hospitality and enthusiastic medical meetings.

THE A. M. A. MEETS AT PORTLAND

One of the most enjoyable meetings of the A. M. A. in prospect is that in Portland in July. Such a trip offers rare opportunities for the members of the South Carolina Medical Association to arrange an itinerary together. Ample provision for this has been made by the Georgia State Medical Association in their plans to have members of the profession from nearby Southern States make Atlanta their starting point and join the Georgia doctors for the trip. Information may be secured as to the details by writing to Dr. A. H. Bunce, Secretary of the Georgia State Medical Association, Atlanta, Georgia. Dr. Bunce is Vice-Speaker of the House of Delegates of the A. M. A. and Mrs. Bunce is President of the Woman's Auxiliary of the American Medical Association. We are confident these two high officials will take a personal pride and pleasure in seeing that South Carolina doctors and their families have every consideration on this splendid outing.

ORIGINAL ARTICLES

*LABORATORY AIDS TO DIAGNOSIS

By Major Arthur T. Brice, Jr., B. A., D. S. C.,
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Sir William Osler, in his Silliman Lectures on the Evolution of Medicine, is my authority for the statement that the examination of Urine, as an aid to the Doctor, and an indication as to the condition of the patient, dates back to about the year 1300, when a Byzantine physician named Actuarius wrote a book on the subject. It now seems probable that the examinations in those early days, and the deductions from them, were based principally on the color and appearance and the amount of sediment in the specimen.

The biological chemistry of four simple substances is now so clearly understood, and their presence so easily demonstrated by simple chemical means, that we can use them as indices of the patient's condition, and the tests for them as guides to the patient's proper treatment in a considerable variety of pathological conditions. Sugar, Albumin, Acetone, and Indican, are these four substances which are not found except in infinitesimal amounts in the urine of healthy normal individuals.

SUGAR when found at all in the urine in amounts above 0.1% is always, with one single exception, present as Dextrose; and it always indicates an improper functioning of the Pancreas. I will have a little more to say of it when we consider the functioning of that gland. It's presence is easily ascertained, qualitatively and quantitatively, by a test that does not require the concentration of the attention for more than five minutes. The single exception which I have referred to is in the case of pregnant women, when sugar may normally appear in Urine in the form of Lactose, and has no pathological significance. Should there be any suspicion, however, of a diabetic complication of a pregnancy, a differential test to determine the nature of the sugar present should be performed, which will clarify the situation to the mind of the physician. It presents no difficulties and is based on the fact that Dextrose is known to produce fermentation with yeast, while lactose does not.

ALBUMIN is a simple protein substance which is present in all parts organs tissues and fluids of the body at all times except in normal bile and normal urine. It's importance to the body is safeguarded by the fact that the normal kidney does not allow it to pass out in the urine. Therefore when we find albumin in the urine it's presence is in every case a *pathological* phenomenon, and it's quantity indicative of the extent of the pathological process. There was considerable discussion for some time as to whether or not we might not find that albuminuria occurred at certain periods in the life of an individual as a normal physiological process. It now seems safe to assert that a transitory, intermittent, or cyclic albuminuria is not infrequently observed in apparently healthy individuals, but that the facts so far brought forward do not warrant the assumption that such forms of albuminuria are physiological. Simon classifies the forms of albuminuria which may be observed in pathological conditions under nine heads:

(1) Albuminuria associated with organic diseases of the kidneys, namely acute and chronic nephritis, renal arteriosclerosis, and amyloid degeneration of the kidneys. In these diseases the finding of albumin in the urine is a factor of primary diagnostic significance. The quantity of albumin eliminated is usually high, as much as 30 grams per day having been frequently observed.

(2) Febrile albuminuria, which may occur in almost any one of the various febrile diseases. It is important to remember in dealing with such diseases that while the albuminuria may at times be referable to a true nephritis developing as a corrolary or result of the disease, such is the exception, and not the rule.

*Read before the Clarendon County Medical Society, January, 1929.

(3) Albuminuria referable to circulatory disturbances. In this class belong the albuminuria so frequently observed in cardiac insufficiency referable to valvular lesions, degeneration of the heart muscle from whatever cause, disease of the coronary arteries, etc., as well as local circulatory disturbances such as compression of the renal veins. The amount in such cases does not usually exceed 1 or 2 grams per day.

(4) Albuminuria referable to an impeded outflow of urine. Simon expresses a belief that such a cause of albuminuria is probably of more frequent occurence than is generally supposed.

(5) Albuminuria of Hemic origin, which is observed in various diseases of the blood as purpura, scurvy, lukemia, pernicious aenemia, and also in cases of poisoning with lead or mercury, in syphilis, jaundice, diabetes, and following the inhalation of ether and chloroform.

(6) Toxic albuminuria; which follows the poisoning by any of the many substances which cause harm to the human system.

(7) Neurotic albuminuria, which has been noted to occur in a rather irregular manner in connection with epilepsy, tetanus, brain tumor, apoplexy, delerium tremens, as well as injuries affecting a certain area of the fourth ventricle of the brain.

(8) A Digestive albuminuria, following the ingestion of excessive amounts of cheese, eggs or beef has also been observed.

(9) Accidental albuminuria, resulting from an admixture of albuminous material such as pus, blood, lymph or chyle to the urine beyond the kidneys.

The qualitative tests for albumin are simple and require only a few minutes. The hot acid test is probably the most reliable as well as sensitive. Robert's reagent provides a satisfactory test but gives one or two false positives that are sometimes disconcerting. Esbach's method using Tsuchiya's modification of Esbach's original reagent is a suitable quantitative means, but requires 24 hours to carry out.

AGETONE is a substance which may be found in the urine, it's presence always being caused by faulty fat metabolism. It is always indicative of some state of malnutrition or starvation, which may accompany any one of a large number of diseases, and the test for acetone therefore always throws considerable light on this phase of a patient's condition. Lange's and Legal's nitroprusside tests are simple and rapid means of determining it's presence qualitatively, and we are now working at the McLeod Infirmary on a quantitative procedure which we hope may give to the study of acetonurias the tool that Esbach's test has been to the study of albumin.

INDICAN is the short name given to the compounds known as sodium and potassium indoxyl sulphate. It is a color pigment the presence of which in the urine is of a rather unusual type of significance. It has been conclusively shown that it's presence in the urine is always indicative of the presence of putrefactive microorganisms most usually in the large intestine. It is therefore a valuable index to the condition of this organ, and as the activities of putrefactive organisms are usually increased and favored by a decrease in the degree of acidity the presence of indican in the urine also often points to a condition of lowered acidity in the stomach. In simple, uncomplicated constipation indicanuria is not seen. Folin's and Obermayer's tests provide simple and rapid qualitative means of gauging the extent of an indicanuria.

MICROSCOPIC: In the microscopic examination of a specimen of urine we look first for three organized sediments which are of primary importance in the diagnosis of various conditions, PUS, BLOOD, and CASTS, and secondly for epithelium.

PUS: For the determination of the presence of pus cells, which are the leukocytes of the blood, in a specimen of urine we have to depend on the microscope which is the only and ultimate means of diagnosis and should be employed in every case. There are one or two chemical tests for the presence of pus, but they are not satisfactory of application, and while we may miss an occasional specimen due to the disintegration of cells from ammoniacal decomposition, still the microscope is the most reliable means at hand. From a clinical point of view it is important to establish the source of the pus in every case of pyuria. This may at

times be difficult, but the following guides may be found of value in making a differential diagnosis.

While pus is usually present in both acute and chronic nephritic conditions it's quantity is usually small. Whenever in the course of a chronic nephritis large numbers of pus corpuscles appear they may be regarded as indicating either an acute exacerbation of the disease or a complicating inflammation of some portion of the urinary tract. Errors may be guarded against by observing the number and character of the epithelial cells present at the same time, particular attention being paid to the round cells which are known to come from the deeper epithelial layers of any part of the urinary tract. Aside from the presence or absence of albumin as shown by the chemical examination, our best guide, however, to the existence of a nephritic condition from the microscopical examination lies is the presence or absence of tube casts. These are almost always present in nephritis, but not in pyelitis. In pyelitis the round epithelial cells are most usually found in association with the pus, often in very large numbers, but the tube casts are absent. Very significant also in pyelitis is the fact that the urine is most often acid and that bacteria in large numbers are generally present. When pyelitis is associated with nephritis it may at times be almost impossible to determine the origin of the pus; but if the rule is remembered that in chronic nephritis the number of leukocytes is small, it is not likely that a pyelitis will be overlooked, particularly if the clinical symptoms are taken into consideration.

A pyuria referable to ureteritis can hardly be diagnosticated from the appearance of the urine, and in suspected cases catheterization of the ureters should be resorted to, which will probably throw light upon the condition.

The point to remember in connection with cystitis is that the urine is commonly alkaline, and always so in the severe forms. It is in this disease that the largest numbers of pus corpuscles are seen. The alkalinity of the urine is due to ammoniacal fermentation and it may happen that the pus cells are disintegrated by the action of ammonium carbonate and not observed under the microscope but form a gelatinous mucoid sediment that escapes from the vessel in a mass when the urine is poured out.

In urethritis pus may be present in considerable amount. In order to distinguish between a simple urethritis and a urethritis complicated by a cystitis the urine should be collected in two portions and allowed to settle. In simple urethritis uncomplicated by a cystitis the first specimen will be cloudy while the second is clear. The reaction of the second specimen will be acid. If a complicating cystitis is present the second specimen will usually be as cloudy as the first, and may be more so, and the reaction of both specimens will be alkaline.

BLOOD: The presence of the red corpuscles of the blood in a specimen of urine is easily recognized under the microscope and denotes a hematuria. I am not going into an enumeration of the various forms of hematuria other than to say that clinically it is of course always all-important to determine the source of the blood.

CASTS: I have already mentioned in connection with their association with pus in cases of nephritis. The exact mode of formation of these morphological elements of the urine is not very clearly understood. They appear to be moulds of various portions of the uriniferous tubules. They may be observed at times in small numbers in the urine of apparently healthy individuals, but their appearance is always to be regarded as a pathological event, and as we have observed most apt to be indicative of a nephritic condition.

FECES

Probably the most useful examinations of the feces to the physician are those for the presence of various parasites and bacteria. As I am, however, endeavoring to limit myself in this paper to simple chemical tests and morphologic examinations, and as the parasitology and bacteriology of the feces is a subject that is rather difficult to handle intelligently in a talk without the use of lantern slides or photographs, I will mention only three simple chemical tests that may be performed easily in a few moments and that often throw considerable light upon a patient's condition.

THE TEST FOR BLOOD is simply performed with the aid of benzedin, glacial acetic acid, and hydrogen peroxide. It is a very delicate test, and in order that it's findings should have a direct bearing on the problem it is advisable that the patient should have eaten no meat containing animal hemoglobin for a considerable period of time before taking the specimen. If this is done the test for blood may often serve as a valuable indication as to what is taking place within the large intestine.

BILE PIGMENTS are normally absent from the feces. They are found there often in large amounts in catarrhal conditions of the small intestine, and their presence is equally easily demonstrated by a simple chemical test

FATS: The presence of fats in the feces is quite constant even in health, and it therefore requires some little experience to determine what amount constitutes an excessive elimination of them, or a steatorrhea as it is called, presupposing of course that excessive quantities of them have not been ingested. A simple chemical qualitative test is available for them, making use of a solution of a dye called Sudan III in acetone, and I therefore often wonder that this test is not more often called for, as steatorrheas are observed in a number of pathological conditions and are quite diagnostic. For example if an insufficient supply of bile is poured into the small intestine a steatorrhea will naturally occur and is observed constantly in cases of biliary obstruction. It is also met with in diseases affecting the small intestine such as atrophy or degeneration of the intestinal mucosa, tuberculous ulceration, or in diseases affecting the lymphatic glands and vessels of the mesentery, as in chronic tuberculosis peritonitis, as well as in simple catarrhal conditions. In diseases affecting the external secretions of the pancreas, such as in cases of sprue, steatorrhea is also an important symptom.

THE BLOOD

In considering the various standard routine procedures which may be applied with profit to the blood I am going to divide my subject under three heads, MORPHOLOGY, SEROLOGY, and CHEMISTRY. Under morphology I shall include the various counts that may be performed and will deal with it first.

MORPHOLOGY: The two morphological elements of the blood which afford the most important indications to a patient's condition are the red corpuscles or erythrocytes, and the white corpuscles or leukocytes. Their number per cubic millimeter, size, shape, color and appearance give us information on two very widely separated phases of the human machinery that is absolutely diagnostic in many instances, and always throws a valuable light that is spoken of as the blood picture in every pathological condition. I am not going into a discussion of the blood picture in various comparatively rare diseases which are primarily blood diseases, but would like to stress the importance of a morphological examination of the blood as an aid to the physician in many of the more common diseases which you most frequently have to deal with.

THE RED CORPUSCLES are indices of the condition spoken of as aenemia, which complicates so many other conditions. Their number per cubic millimeter, considered in conjunction with an estimation of the hemoglobin which they contain based on a percentage scale of normality, indicate to us not only the extent of an aenemia but also its nature. In the primary anemias the percentage of hemoglobin and the red count may be low, but the absolute quantity of hemoglobin per single red cell is high. In the secondary anemias not only the percentage hemoglobin and the red count, but also the absolute hemoglobin per cell is low. We thus see that a red cell count and hemoglobin estimation will tell us at a glance whether an anemia is primary or secondary, mild or severe.

THE LEUKOCYTES OR WHITE CORPUSCLES are indices primarily of infection, and secondarily, as they are the elements of the blood that combat infection, of the resistance of the human organism to that infection. Whenever an even moderately high white count is obtained it may be safely said that infection of some kind exists. There are only three common exceptions to this rule and these give to the white blood count it's most important diagnostic value. In Malaria, in Typhoid fever, and in Influenza, the white

blood count is universally normal or low, and therefore when such a count is obtained in a fever of this class it is almost as equally diagnostic as an actual demonstration of the organism involved. The kind, and percentage proportions present of the different leukocytes, or the differential count as it is spoken of, is also of value in all infectious conditions. A high percentage of polymorphonuclear neutrophils having the same significance as a high total white count, as these cells are the normal scavengers of the blood, and a low percentage of them consequently also indicating a lowered resistance to the infection. The percentage of eosinophilic leukocytes present also has a particular diagnostic significance, as their proportion is almost always increased in cases of infection by intestinal parasites. Besides these normal types of leukocytes there are other abnormal forms which are diagnostic in certain particular conditions. In addition to the information which we have already credited to them, the normal polymorphonuclear cells also give us a very valuable prognostic index by an examination of their age, based on nuclear morphology.

SEROLOGY: In the serological tests we make use of the presence or absence in the blood serum of substances variously spoken of as antibodies or agglutinins, the exact chemical nature of which we have no knowledge of whatever, but whose existence has been proved, and which have been found to be indicative of various diseases in various of their phases. The two most useful of these tests are the Wassermann and the Kahn, with which you are all undoubtedly familiar. I say "undoubtedly" because I feel sure that you depend on these tests for your diagnosis in the condition known as Syphilis, to a much greater extent than you depend upon Laboratory procedures for information or guidance in other diseases. I cannot but regret this, and would wish that you were as conversant with the application of other tests as you are of these two. It may interest you to know that at the McLeod Infirmary we run our own Kahn test and always also send off a specimen to the State Laboratory at Columbia to be checked by the dual test which they employ, and that in our small series of 169 tests during the past two years we find an 80% complete agreement between the Wassermann and the Kahn, the remaining 20% being divided 14% Kahn Positive where the Wassermann was Negative, and 6% Wassermann Positive with Kahn Negative; and that in general we find the Kahn test to come positive earlier in the disease than the Wassermann, and the Wassermann to remain positive after repeated treatments longer than the Kahn.

The Widal is another serological test that is useful in the diagnosis of Typhoid Fever. It is also useful as a means of testing for immunity to Typhoid fever. It depends upon the power of immune or infected serum to agglutinate or cause clumping among the bodies of the typhoid organism. In making use of the Widal it should be remembered that it is only in very rare instances that it comes positive during the first week or ten days of the disease, and during this time, lacking the facilities to actually culture the organisms themselves from the blood, the most reliable diagnostic test is the white blood count.

One other serological test that I want to mention is the Van den Bergh. This test is strictly speaking a chemical reaction between bile when it is present in the blood serum, and Ehrlich's Diazo reagent, but as it is performed on serum, and is not an exact quantitative measurement of any chemical substance in the blood, I think that it can be classed under serological tests. We will consider it as such for tonight at any rate. The test is particularly useful in determining the origin of all jaundiced or Icterus conditions, it being said that it will detect the presence of bilirubin in the blood serum in dilution as high as one in 1½ million parts. If the reaction is reported positive and immediate the indication is that there is a large amount of bilirubin in the blood and the jaundice is probably of the obstructive type. If the reaction is reported negative or delayed the indication is that the bilirubin is not present in the blood in such large quantities and the jaundice is probably of a haemolytic origin.

A rather useful little test in following the course or degree of severity of a jaundice is the Icterus Index. This is simply a color comparison of the clear blood serum against a set

of artificial standards, which grade its degree of yellowness.

CHEMISTRY: Let me preface my remarks on the subject of Blood Chemistry by saying that there is no such thing as a complete blood chemistry. There are seven or eight substances normally present in the blood in the quantitative increase or decrease in which we are interested is as many different pathological conditions, but as far as our knowledge goes up to the present time we cannot even say in what compounds lie all of the simple element Nitrogen which we find in the blood. It is therefore absolutely useless for you to send a patient or a specimen of blood in to a clinical laboratory with the request for a complete blood chemistry; because the Laboratory just simply doesn't even know how to go about it. Blood chemistrys are of no value to a Doctor unless he knows something about the substance for which the bood is examined and its action in the human system in the condition or conditions on which he is seeking to obtain a grasp, because all that the Laboratory can tell him is whether the substance that it has examined for is present in the blood in proportions that are high or are low. If a Doctor has this knowledge, however, blood chemistrys may be very valuable to him. I will try to give you a list of the substances that the blood is most commonly examined for with a word or two about the conditions in which each is of particular interest, and then a few words of explanation on some of the more practical considerations of the matter:

SUGAR is of primary interest in the condition of Diabetes, in which when uncontrolled it is high. Should the patient be on an insulin diet and have taken too much insulin so as to approach the condition known as insulin shock the sugar value will be low.

NON PROTEIN NITROGEN consists of all of the nitrogen in the blood exclusive of that contained in the blood proteins. It includes the nitrogen contained in the Urea of the blood, the Uric Acid, the Creatinine, the amino acids, and other substances which as I have mentioned we are not yet acquainted with. It is of interest in Nephritis, Uraemia, and Bichloride of Mercury poisoning, in all of which conditions it is proportionately high to the extent or severity of the disease.

UREA is of interest in the same conditions in which the total non protein nitrogen is important, and high values have the same significance. In getting your grasp on any of these conditions by means of a blood chemistry use one or the other of these two substances, because the Urea Nitrogen is simply about one-half of the total non protein nitrogen, and should you ask a laboratory for a Non Protein Nitrogen and a Urea, the laboratory would realize that you were simply requiring it to run two separate tests as a check on the accuracy of it's work. Some Doctors seem to prefer one of these two substances and some prefer the other. My own belief is that the technic for the determination of Non Protein Nitrogen is the more reliable, and that it is an equally sensitive index of the patients condition.

URIC ACID: This substance is supposed to be the first of the nitrogenous group of substances to show an increase in the blood stream in cases of kidney impairment, but there are such profound difficulties in the way of it's accurate determination that it is coming less and less to be called for as a blood chemistry. It's most practical use now seems to be in the control of the condition of Gout, in which it is quite high.

CREATININE, is the substance in the blood which has by far the greatest prognostic significance. It is the last of the nitrogenous group to show increase in kidney impairment, and when we find creatinine in amounts greater than 5 milligrams per 100 cc of whole blood we may say "Death within 6 months" with almost mathematical surety. Whenever a high total non protein nitrogen value is obtained a Creatinine determination should also be run, and most Laboratories will do this without being told to.

THE CHLORIDES of the blood are of interest in differentiating two quite large groups of diseases. In renal and cardiac diseases the values are high. In fevers, diabetes, pneumonia, and severe toxemias of the upper gastro-intestinal tract they are low. Occasionally a differential diagnosis will hang on the result of this test.

BROMIDES are not normally found in the blood. The chemistry for their determination is useful in controlling the treatment of epileptics with bromides, as over 150 milligrams per 100 cc of serum in the blood stream will result in an intoxication that is spoken of as the toxic zone.

CHOLESTEROL is a substance that is still quite a subject for study. It has been found high in a number of different conditions, and the test for it is sometimes used as an index of the severity of a condition.

CALCIUM is the substance of which as you know our bones are composed. It is carried normally in small amounts by the blood stream and the quantitative test for it's presence is of value in conditions in which the calcium metabolism of the body is affected, as in parathyroid tetany; or where it is desired to control the calcium of the diet on account of the presence of abnormal calcareous growths such as cataracts.

For the practical side of blood chemistry I would like to remind you of just two important considerations. First that SUGAR values in blood decrease very rapidly after the blood is drawn, so that it is necessary in order for the test to be of any value to run the determination within an hour after taking the specimen. No preservative of sugar values for longer than this has as yet been found. Doctor Carrigan can now run an accurate blood sugar for you here in Summerton, which should simplify the problem of your diabetics tremendously. If you will send them over to us at Florence we have an accurate test that requires the use of only 0.1 cc of blood taken from a needle prick of the finger or ear. The values of the other group of nitrogenous substances which are of interest are not as subject to rapid deterioration, and are safe for as long as 20 hours at ordinary temperatures.

Secondly I would like to remind you that all of our methods for chemical analysis of blood are based on accurate volumetric measurements, and it is therefore necessary for us to have the blood in liquid form. The best means of preserving it in this condition is by the addition of a few crystals of potassium oxalate per 5 or 10 cc of blood.

SPINAL FLUID

A word or two about cerebrospinal fluid, which is a very nice type of fluid to work with in the laboratory. I do not know how expert many of you may be in making a spinal tap and drawing a fluid that is free from blood. This freedom from blood is a sine qua non of any spinal fluid test, as it's presence invalidates almost all of them. If you can obtain a blood free specimen however there are a number of simple tests that may be performed on it that are usually pregnant with differential value. The Wassermann and Kahn tests may be carried out on it and are diagnostic of syphilis of the central nervous system. The colloidal gold test will differentiate pretty clearly between syphilis, paresis, and meningitis. The colloidal mastic test is again diagnostic of syphilis, as well as somewhat indicative of its severity. For differentiating the various types of meningitis we have the differential count of leukocytes, the polymorphonuclears predominating in acute or purulent meningitis, the lymphocytes in tuberculous meningitis. The cell count is indicative of the severity of the process. The quantitative chemistry for sugar also gives a clear cut differential test between tuberculous and purulent processes.

THE PANCREAS

The pancreas is the gland in our bodies that controls our sugar metabolism. When it goes wrong as in diabetes, our tissues fail to properly use up the sugar that is supplied to them from our food and this sugar backs up as such in the blood stream. When a certain level of sugar in the blood, which varies somewhat with every individual but on the average is about between 170 and 180 milligrams per 100 cc of whole blood, is reached the sugar breaks through the barrier of the kidney and appears in the urine. In controlling a diabetic it is first necessary to ascertain accurately this sugar threshold, or value in the blood above which the sugar appears in the urine, and thereafter for some time the diet and insulin treatment may be controlled by repeated examinations of the urine. I would like to recommend to you Benedict's Quantitative Reagent for this purpose. The test for sugar in urine with this

solution is carried out exactly as with other reagents with which you are familiar, except that the amount of urine required to produce the usual color change is accurately measured from a pipette which enables you to measure accurately the sugar present even when the amount is normal. You are thus enabled to catch your diabetics well before the urine sugar has reached an alarming proportion and there will not be the repeated necessity for blood examinations except possibly once or twice a year to be sure that the threshold value is remaining the same.

THE LIVER

The test for hemoclastic crisis is a simple test of the functioning of the liver. The term hemoclastic crisis is applied to a transitory leukopoenia which follows anaphylactic shock due to the presence of toxic protein-split products in the blood stream. It apparently results from a failure of the liver to detoxicate these modified proteins, and thus suggests a disordered function of the liver. The patient fasts for at least five hours and a leukocyte count is made. The patient then ingests about 200 cc of milk. The leukocyte count is repeated at one-half hour intervals for from one to three hours. If it is found to have decreased during this period the test is positive. Differential leukocyte counts may be taken with each total leukocyte count and if the test is positive should show a relative lymphocytosis. This test has been observed to be positive in inflammatory, malignant, and cirrhotic diseases of the liver, and in diseases of the biliary system and gallbladder, in heart diseases with chronic passive congestion of the liver, in Banti's disease, and in lymphatic leukaemia. It has no practical significance in gallbladder surgery.

Another liver function test that is equally simple to perform, and possibly a little less discomforting to the patient in that only two specimens of blood are taken within an hour instead of 5 or 6 over three hours, is the Rosenthal Bromosulphonphthalein test. In this test a definite amount of the indicator dye per kilogram of body weight is injected into the patient intravenously, and specimens of blood are taken from the other arm at the end of one-half and one hour. The dye has been found to be excreted practically only by the liver and is non toxic. A normal liver will remove most of the dye from the blood stream in 15 minutes and practically all of it within one hour. By measuring colorimetrically the amount of the dye which remains in the blood at the end of one-half hour and one hour we can therefore get a very good idea of the extent of a liver impairment.

THE KIDNEYS

The phenolsulphonphthalein test for kidney function is probably the simplest of all the functional tests for the general practitioner to perform, and as it has been in use since 1910 it's reliability is well established. The test is carried out as follows: The patient drinks about two glasses of water to promote secretion of the urine, and twenty minutes later empties the bladder. Exactly 1 cc of the indicator dye is then injected intramuscularly, or if there be a general edema to hinder absorption intravenously. One hour and ten minutes from the time of the injection, the ten minutes being the usual average time for the first appearance of the dye in the urine, the patient voids as completely as possible and the whole specimen is saved. The patient voids similarly again at the end of two hours and ten minutes, and the specimen is saved. The color of the dye is brought out by making the specimens each up to 1000 cc with water and alkalinizing them strongly; and the percentage of the dye eliminated in each specimen measured by comparison of the color with a set of known standards. The normal kidneys excrete a total of from 60 to 75% of this dye in the two hour period. A fall to 40% indicates impaired function and demands serious attention, although it does not necessarily mean nephritis. Reduction to 20 or 30% is the rule in well marked cases of nephritis; while excretion of less than 10% may usually be interpreted as forecasting an early fatal termination. Exceptionally deaths from uremia have occurred when the output was as high as 40%. This test finds its greatest usefulness in the study of chronic interstitial nephritis, the form of kidney disease in which the urinary changes are the least striking. Todd gives some cautions

for the use of this test which it may be well for me to repeat to you.

(a) Entirely normal or even increased excretion is sometimes noted in acute nephritis, especially in acute glomerulonephritis.

(b) In certain other cases of acute nephritis extremely low excretion, reduced almost to zero, which in chronic nephritis would point to an inevitable early fatal outcome, may exceptionally be followed by complete recovery.

(c) For a short period at the outset of a chronic nephritis there may be exalted renal activity, with an output of 70 to 85%.

(d) Low excretion, exceptionally as low as 10 or 15% is the rule in cardiac decompensation with chronic passive congestion of the kidneys, and this rises rapidly when the congestion is relieved by improved heart action.

(e) In chronic diffuse (parenchymatous) nephritis, although the output is significant, it sometimes presents inexplicable variations.

The blood chemistries for Non Protein Nitrogen, and Urea, are also as we have mentioned primarily tests for kidney function, as after a certain critical stage of the disease is reached the retention of these nitrogenous products in the blood always exists.

THE STOMACH

A number of different procedures are standard for analyzing the gastric function. We do a very simple one at the Infirmary which I think is quite efficient. On an empty stomach the patient is given a test meal to stimulate gastric secretion, consisting of two slices of dry bread and a glass of water. An hour after the beginning of the meal the stomach content is removed by means of a stomach tube and filtered through a coarse paper. The filtrate is tested for the presence of free hydrochloric acid qualitatively, and the amount present then estimated quantitatively by titration with N/10 Sodium Hydroxide. The quantity of combined and total acids present is then similarly estimated by titration with the alkali. This procedure is of value as low acid values are invariably obtained in cases of gastric cancer, while high values are the rule in ulcer. Low values are also quite universally found in pre-clinical pernicious aenemia. The filtrate is next tested qualitatively for the presence of lactic acid, which is not secreted normally by the stomach although small amounts of it may be ingested with the food. It's presence in considerable quantity is principally indicative of cancer. The specimen is next tested for blood with the usual benzedin chemical test, as blood is usually found in varying amount in the content in either cancer or ulcer. The final examination is a microscopic one, which makes note of any unusual elements that may be seen, but looks primarily for the presence of the bacillus of Boas & Oppler. This organism at one time caused quite a stir in the discussions on the etiology of cancer, but was later shown to have no direct bearing. It is, however, the principal lactic acid producer that may be found in the stomach, and our microscopical examination is thus a check on our chemical test for lactic acid and vice versa.

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*NEPHRITIS OF CHILDHOOD

By Julian Price, M. D., The McLeod Infirmary, Florence, S. C.

For years there has been a great diversion of opinion with regard to the different types of nephritis in childhood. That there are definite varieties is well known, although there are many cases which are so nearly on the border line that they were hard to classify. To appreciate just what type of nephritis we are dealing with is not only of academic interest, but is of great clinical significance, for on it largely depends the type of treatment we will institute, the complications we will look for and the prognosis we will give to the parents.

I am presenting the classification which seems to me the best and one which I think is gradually coming to be recognized as the most workable. It has been recommended by many workers and is the one which Lyttle, of New York, uses in his volume on Diseases of the Kidney in the new system of Clinical Pediatrics. Under each type, I will give briefly the general picture of the disease.

Before taking up these different types, however, I wish to run over the various tests which

*Read before the Clarendon County Medical Society, January, 1929.

we can make to find out as best we can the functional activity of the kidney. Physical examination with its inspection, palpation, and percussion gives us practically no help and we are forced to use other methods. They are briefly:

1. The excretion test. How much water is the kidney capable of eliminating? The simple method of measuring the amount of fluid taken into the body within 24 hours and comparing it with the amount excreted will tell us this. In the normal kidney these amounts will usually be within 200 cc. of each other. Another method, the flushing test, is to get the child to take 1000 cc of water within two hours and measuring the amount excreted within the next two hours. Normally about 70% will come through.

2. The concentration test. Adapted from the method advised by Mosenthal, this consists in taking two hour specimens during the day and a twelve hour specimen at night, determining the specific gravity of each. Normally there should be a difference of .010 between the highest and lowest, showing that the kidney can excrete more concentrated urine at one time than at another.

3. The phenolphthalein test. 1 cc. of the dye is injected, the urine collected in one and two hours and the percentage of dye excreted determined. Normally a child will excrete from 30-50% within the first hour and 60-70% before the second hour.

4. The careful examination of the urine itself, with especial regard to the color, specific gravity, albumen, and microscopic findings.

5. Blood chemistry, noting especially the amount of urea, non-protein nitrogen, and chlorides.

6. The blood pressure.

To come to the nephritis itself, we have three great classes—the glomerular, the tubular (so called nephrosis) and the mixed, based upon the findings in the kidney itself. The pathologists tell us that no type is found pure, that there is never an involvment of the glomeruli without some injury to the tubules and parenchyma as well, but there is enough of a preponderance of damage to one part of the kidney to give a definite clinical picture. Any of these types may become chronic, although chronic nephritis is far less common in children than in adults, and for this reason, I will confine myself to the discussion of the acute conditions only.

Let us consider first the acute glomerular nephritis. A case which I saw two weeks ago will well illustrate the picture. A child of four was brought to Dr. Mobley, of Florence, for consultation with regard to his tonsils. For the past month the child had been fretful, irritable, and had had no appetite. Two weeks previously he had started to run a mild fever each day. Dr. Mobley found that his tonsils were enlarged and somewhat diseased but did not think that they could account for his condition, so referred him to me for examination. I found a boy of four, well nourished, who appeared somewhat irritable and drowsy. The general physical examination was negative although the father said that a day or two before this his eyes had seemed a little puffy. The blood pressure was normal. The urine was smoky in appearance with a specific gravity of 1.014. The albumen was two plus, and there were large numbers of red cells in the specimen with scattered hyaline and granular casts. A diagnosis of acute glomerular nephritis was made and the child taken home to be under the care of his family physician.

The history just given is a typical one. The onset is more often mild than stormy, with a general lassitude, a low fever, and frequently an upper respiratory infection. The first thing that the parents notice abnormal is either the slight puffiness of the eyes or the change in color of the urine. Physical examination reveals very little. In this type we do not have the generalized edema. The blood pressure tends to be raised. The amount of urine excreted is normal or only slightly diminished. The Mosenthal test shows that the kidneys are not able to concentrate urine satisfactorily. The phthalein output is greatly diminished, sometimes being as low as 10% in two hours. The blood chemistry shows an increase in urea and non-protein nitrogen, with a normal chloride. The urine itself ranges from a smoky to a bloody liquid in appearance. Microscopically we find many red cells and casts with occasional white cells.

The outlook in these cases is fair. If the

child recovers from the attack the chances of its going on into a chronic state are small, although such conditions are occasionally met with. Occasionally the child loses so much blood through the kidneys that there is a very marked secondary anemia. I saw one boy with a hemoglobin of 20%. So it is with regard to the acute condition that we have most to worry in giving our prognosis. The milder cases clear up readily under treatment, the severe cases lead on to uremia and an increasingly high blood pressure. In the severest stages we find convulsions, coma, sometimes small ruptured blood vessels in the brain, and death. Unless one is sure of his ground, the prognosis in these cases should always be guarded.

The treatment consists in taking all strain possible from the kidneys, aiding in the elimination of toxins, and attempting to control the high blood pressure and onset of uremia. Absolute rest in bed is essential, the patient remaining in bed until the urine is free from blood. Fluids can usually be given freely and in some cases should be forced. A diet low in protein and free from salt is usually employed. Of course any focus of infection should be removed if possible. Often the simple draining of a sinus will work wonders. For the uremic convulsions, which Blackfan claims is due to an edema of the brain, magnesium sulphate is our best weapon. Large doses are necessary, and may be given intravenously, intramuscularly, or by mouth and rectum. I have given one ounce every three hours, either by mouth or rectum, with very satisfactory results. For the high blood pressure, the use of magnesium sulphate coupled with nitrites seems to be most efficacious. Chloral hydrate is of great help in controlling the convulsions. I saw one child of seven with a blood pressure of 200 in uremic convulsions, during which she suffered a small cerebral hemorrhage with a resulting temporary hemiplegia. By the use of magnesium sulphate, one ounce by rectum every three hours, sodium nitrate every 6 hours, and chloral hydrate three times a day, her blood pressure was brought down to 140, her uremic condition disappeared and she was soon her lively self again.

When we come to tubular nephritis, we find a different picture. The onset often follows an upper respiratory infection. The first thing noted is a slight swelling of the feet. On examination, nothing is made out that is abnormal except the edema of the feet or if it has progressed a massive edema of the extremities, scrotum, and an ascites. The blood pressure is normal. The urine is small in amount, and pale. The specific gravity remains very little changed in the Mosenthal test. The phthalein output is normal or only slightly reduced. The examination of the urine shows a very large amount of albumen and it is in this type that we find urine boiling solid. Microscopically we find many casts, a few white cells, and very rarely an occasional red cell. The blood chemistry shows a reduction in the chloride content, and a normal or very slightly increased non-protein nitrogen.

These cases have really a poorer outlook than the acute glomerular ones, not so much because they are more severe in a single attack but because they tend to have recurrent attacks with a gradual wearing down of the strength of the heart. Their terminus is not uremia with convulsion, but a generalized edema with cardiac failure.

In treating these cases, we are attempting to aid the body in the elimination of fluid, prevent the reaccumulation of the fluid, remove any source of irritation to the kidney, and strengthen the heart. Water should be limited if the kidney excretion is limited and then given freely when diuresis sets in. A high protein and salt free diet is advocated. Magnesium sulphate is helpful in a good many of the cases in helping the body to get rid of the fluid. Theobromine, caffein, urea, digitalis, thyroid and parahyroid, have all been found helpful in some cases. Hot packs are frequently used and in some cases are of great value. It is essential in this type of nephritis, as in the acute glomerular, that we remove all foci of infection. Marriot and others claim that an infection of the upper respiratory tract and adjacent sinuses are usually the exciting cause. The patient should be kept in bed until all the edema has subsided and the urine shows only a trace of albumen. The parents should be warned of the chance of recurrence.

In addition to the two types discussed above,

we have a third type in which clinically we have elements of both the glomerular and tubular. There may be a marked edema with a high blood pressure and blood in the urine. These cases tend to be more chronic in type than the others. For want of a better name, we call them the mixed or interstitial type. In their treatment we have to be guided by the clinical picture. Elimination of the fluid from the body and toxins from the blood, removing all strain upon the heart and irritation from the kidney, carefully watching the blood pressure and approach of uremia—must all be sought for. The outlook in these types is not good because of their tendency to chronicity.

From the above discussion it can be seen that nephritis in children is not a condition to be considered lightly. A knowledge of just what the disease is, what the complications are that may arise, and what part focal infection may play are essential for the best treatment.

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*PRESIDENT'S ADDRESS

By Rolfe E. Hughes, M. D., Laurens, S. C.

"He who cures a disease may be the most skillful; but he that prevents it is the safest physician." (Thomas Fuller)

There are two problems confronting the public today, problems which are distinctly the duty of the medical profession to solve, in fact, it is a responsibility and really an obligation resting heavily upon us. Our past successes and victories in the whole realm of medicine has been such as to justify a confident conviction of our ability to handle these also, especially when the etiology and the prophylaxis is so well understod as it is today.

Dr. Alfred Stille said; "A physician in the highest sense is an artist whom no amount of knowledge and no degree of culture can ever elevate to a high rank in his profession unless he has the perception of form, color, proportion, and the manifold qualities and relations of things."

The writer feels and his conscience, (note the word conscience please and not sensationalism) prompts the thought that in our very zealous, most commendable, and enthusiastic work spurred by the wonderful achievements in the last thirty years during which time advances have been greater than for any five hundred years before, we are in a way overlooking two grave questions, very far-reaching and disastrous, and to a large extent preventable;

First, The Care of the Tuberculous. This is a subject that is entitled to much study and thought. The economic and the hygienic sides could be markedly improved, and in this day when its cause, prevention, and cure are understood by a public, an alert and largely educated public, its inadequate means of control is a reflection of the intelligence of our State and profession. The people should be made to understand that the state is culpable if its citizens are allowed to become ill through manifest neglect. Last year over one thousand negroes died from this disease in South Carolina. The very fact of its much lessened mortality in the whites, under modern sanataria methods, should be in itself an incentive for and proof of the necessity now of adequate bed facilities for the indigent either white or colored. Can we conceive of anything more important for the state than the proper care for these patients? The hospitals, besides approved treatment, would prevent its spread, and the educational side of so much significance would be of untold value. In our state of nearly two million people, there are FOUR-HUNDRED AND SEVENTY-FIVE BEDS. Its ridiculous if it wasn't so pitifully pathetic. So the doctor is the one to meet this and he can in South Carolina. He will as he always has done, do his full duty. Our large negro population must be educated and thus protected for their own sakes as well as a prophylactic measure for the whites.

Very wisely the state, in line with progress and necessity, sees where sixty-five million must be spent on the highways. Couldn't it also spare the pitiful sum of say two per cent of this amount on the establishment of Tuberculous beds necessary to control the spread of the disease? If not then Christianity and Civilization are but hideous masks, and morals and esthetics seem out of place in man, said to be created in God's image.

Another problem and even of more impor-

*Delivered before the South Carolina Medical Association, Charleston, S. C., May 8, 1929.

tance, is the *increase of mental diseases.* "The diseases of the mind are more destructive and in greater number than those of the body." It has been enormous in the last twenty-five years, "The office of the physician extends equally to the the purification of the MIND and BODY. To neglect the one is to expose the other to evident peril. It is not only the body that by its sound constitution strengthens the mind, but the well regulated mind by its authoritative power maintains the body in perfect health." (Plato). Today medicine, particularly preventive medicine, should be the property of all mankind, a HUMANE man, a cultured progressive physician must be aware of his relationship to the civic and economic problems of the community and nation. No longer can bromidic platitudes, sentimental protestations, self styled philanthropic, and martyr like poses even serve as a placebo. It is a day of thought, *judgment, service, synergism,* and *action.*

Frankly, I think no physician should consider himself well educated or trained, until he is as well qualified to diagnose and treat mental troubles as the physical. Very few of us have the training and interest necessary to intelligently manage these cases, and a good many of us accept with a puerile satisfaction our blatant ignorance in mental troubles, as much as to imply, "I am ne plus ultra on physical ills, but on the mental, that is not in my line, you will have to consult a psychopathist."

All of us can't be eminent psychyiatrists any more than all can be expert surgeons or opthalmologists, but it should be a phase of our professional service to cultivate for duty's sake as well as adorn our professional accomplishments, important even to the surgeon, especially to pediatrician and specialists. Over half of the beds of hospitals throughout the country are occupied by patients suffering with mental or nervous diseases. Are not such facts alarming? Our state institution shows a noticeable increase in the number of admissions during 1928 as compared with 1927 is was reported 1,274 patients having entered the institution last year or 250 more than were admitted the year previous. The large increase in the number of admissions was in great part due, the report adds, to the number of persons affected by *pellagra.* Last year the institution received 287 persons suffering from this disease while the preceding year 183 were admitted.—Pellagra is preventable.

Then when experts in this line tell us that the causes are so numerous and name such as toxie psychosis, exhaustion psychosis, thyroid, the exanthematous fevers, diphtheria, influenza, tonsillitis, Pellagra about ten per cent, neurosyphilis thirty-two per cent, and the various neurasthenias, fear repression, suppression, all having to do with the educational ENVIRONMENT, many of which are often terrible factors. All of us have cases of religious fanatics, for instance, often caused and made worse by an atmosphere of sepulchral yum yum and sensational so-called professional evangelism. Block says; "While it is our duty to uphold religion, it is also our duty to bring about an adjustment and reconciliation of the herd instinct with the primitive instincts, and not expect, nor allow patients to expect, to be less than human in *feelings* and *desires,* but to teach them the necessity of thinking of the good of society as a whole and to retain their peace of mind by never doing violence to their conscience or the conscience of others. Unfortunately, religion, as it is sometimes taught causes more insanity than syphilis, and it is our duty to make it more a matter of intelligence and less emotion. A preacher should be careful never "to hope to merit Heaven by making Earth a Hell". Their intention is often, of course, good and praiseworthy, but such vague expressions as "unpardonable sin", or "eternal torment," instill into the people FEARS which undermine their reason. So often in response to the question, "When did it begin?" they reply, "I was attending a revival," or "It was during a protracted meeting". Would it not be better to teach people that it is best to be good in order to retain their self respect, to have a clear conscience, to avoid social degradation, to avoid disease, rather than teach them that they will lose their immortal soul and will be punished through all eternity? Let them realize their duty towards civilization and the part they should play in it."

Olin Chamberlain, Charleston, wisely says; "Society has become very complex; instincts and conventions are continually at war. Dem-

ocratic institutions throw a great deal of responsibility upon the individual. Humanitarian ideals, splendid as they are, nurture and save the weakling during infancy and early childhood and at early manhood launch him out into the world on his own responsibility." Fear, anxiety, grief, disappointment, rush, and tension all are factors. The modern scheme of life reduces mentality; but modern sentimentality does not permit sufficiently rigorous methods and so we are trying to absorb every kind of physical and mental disability, and thus we are gradually reducing the level of intelligence and morality. Hence our growing army of juvenile criminals. Environment is far more important than heredity.

The well informed surgeon hesitates to operate on the neurasthenic, knowing that psychic shock is worse than traumatic, and its tendency to produce surgical neurasthenia very great. Do all surgeons realize this? Psychitrists tell us, "It is a great mistake to regard either hallucinations or delusions as being groundless. Their meaning is not always obvious at first, but on careful study they are usually found to have a very definite meaning."

If then, we know the causes and know that many of them are removable; if we get more of the differentiation of the various mental troubles, we are better able to prevent and manage them. "Let me clear the ground, and, I hope, avoid offense, by saying that I am not a psychiatrist nor assuming that I am talking to boys or men of immature minds. On the contrary, I am in my own mind genuinely paying you a compliment, if I can compliment you, of assuming that I am talking to men who have thought on and are interested in these problems. And if I can be of any service to you, it is by fortifying you in your determination to continue to think about them and guide yourselves accordingly."

Conclusions

Is it our duty to get more sanitaria care for the indigent tuberculous?

Is it a duty of service to broaden out on Mental Hygiene?

If not then the subjects can be dismissed and we can leave them to some philanthropic individual or Humane Society and organized medicine fails.

"A gospel born of love, justice and fidelity,
To soothe life's cares, drive grief away and uplift humanity."

NOTE: References were not each time put in quotations, but the author is grateful to the following; Doctors G. T. Tyler of Greenville, Stuart McGuire of Richmond, L. G. Beall of Black Mountain, North Carolina, Olin B. Chamberlain and W. A. Smith of Charleston, and Bates Block of Atlanta.

Drs. Ernest Cooper, William A. Smith have proven by facts gotten from all the States as well as by their personal successes that institutional care for the tuberculous needs no defense, it is now accepted as the best mode of prophylaxis and treatment. South Carolina's climate is as good as any other. We have doctors trained in this work, all we lack are the beds. "Loyalty is that quality which prompts one to be true to that which he undertakes."

Where there is a will there is a way.

EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M. D., F. A. C. S., CHARLESTON, S. C.

VASOMOTOR AFFECTIONS OF THE MIDDLE EAR

Prof. G. Portmann, M. D., Annals of Otolaryngology, Rhinology, and Laryngology, March, 1929

For a long time the action of the sympathetic on the labyrinthine circulation, on the one hand, and on the secretion of the endolymphatic fluid on the other, has impressed otologists. "Glaucome" is a term used during these last years by Abeulker and by myself, to designate the hypertension of the endolymphatic fluid.

Lermoyez showed the importance of angiospasm of the vestibular or chchlear branches of the internal auditory artery in certain cases of deafness or vertige. (Angiespasm may also occur in the retina.)

The stenosis of the internal auditory artery, which is brought about slowly, causes a gradual anesthesia of the ear—that is to say, *deafness.* But when the spasm ceases suddenly; the blood rushes again to the labyrinth which is stunned by it. This too sudden afflux, which in the fingers produces ordinary pain, causes here both the special pain of the cochlear organ, which is the buzzing, and the suffering of the vestibular organ, which is the vertige. Besides that, it abolishes the anesthesia of the ear, i. e., deafness.

It is expedient, from another reason, to oppose this syndrome to Meniere's disease; this sudden paroxyzmic, apopletic and recurrent vertige, which breaks out in the repose of full health and which was so long united with cerebral apopletic congestion. (I have seen cases of vertige not of the Meniere type during the past five months.)

In Meniere's disease, and in Lermoyez's syndrome, the phenomena are the same, but they make their appearance in reverse order.

Vasomotor affections of the middle ear.

Meniere's Disease

Good hearing.
Sudden vertigo.
Sudden deafness and decreasing.
Slow recovery.

Lermoyez's Syndrome

Good hearing.
Sudden vertigo.
Gradual deafness.
Quick return of hearing.

In Meniere's Syndrome there is congestion and labyrinthine overflow and in Lermoyez's Syndrome there is ischemia consecutive to the arterial spasm.

Kobrak ascribes the pathogeny of Meniere's vertigo to antioneurotic fits of the eight pair of cranial nerves, depending on two principal causes; 1. a great instability of the vago-sympathetic system. 2. a local labyrinthine trouble.

By experiments with pharmocodynamic substances (atropin, pilocarpin, adrenalin) Kobrak tries to find in each individual case whether it is a question of vagotomy or one of sympathicotony.

The vasomotor stasis of the vestibular artery may cause a giddy sensation apart from any other manifestation. All this agrees with the opinion that vertigo is essentially a phenomena of irritation.

All otologists know that vertigo disappears with the destruction of the labyrinth and that an irritation of the internal membranous ear or of the vestibular nerve is necessary to cause the giddy sentation.

One sees, on the other hand, the reflex vasodilatation which locally accompanies the least irritation of the tympanum and which when this irritation is too violent, also produces vertigo.

These show well the connection which exists between the vertigo and the phenomena of vasodilatation in the area of the labyrinth.

There are operations on the internal ear for this vertigo but this vertigo may not be an operation condition but a medical disorder treatable by drugs acting on the vasomotor system through the sympathetic nerves.

From this rapid review of the different affections of the labyrinth by which one has brought forth the pathogenic point of view and the probable existence of vasomotor troubles, one must now separate some precise ideas:

Vertigo, when a sign of vestibular suffering is produced by the sudden vasodilatation which follows the spasm in the syndrome of Lermoyez.

The vertigo which, on the contrary, accompanies a rather pronounced ischemia of the labyrinth, disappears after sympathicectomy, the consequence of which is a vasodilation of the labyrinth.

Tinnitus means cochlear suffering and follows apparently the same rules, being produced either by vasoconstriction or by vasodilation; it may be cured or ameliorated, according to the cause by one provoking in the region of the labyrinth the vascular action contrary to that which has caused it. (This opens a new treatment for tinnitus).

There are, therefore, these two syndromes, Lermoreyez and Meniere, which may, moreover, succeed each other alternatively in the same patient.

According to the indivdual, one observes, in fact, different reactions to the vegetative system under the influence of various causes.

But most often one meets with a hypertonic or parasympathetic syndrome, which, as we have seen, permits us to classify individuals into vagotonic and sympathicotonic.

The most diverse causes will be found as the origin of the vagosympathetic troubles and hence of the labyrinthine vascular spasms. The causes may be either mechanical, endocranial, toxic or even simply phychic.

The most important causes susceptible of acting on this regulating apparatus are undoubtedly the action of the nervous system and the action of the endocrine glands, above all, the hormone of the spurarenal gland—adrenalin.

(Long ago it was found that Atropin benefitted some cases and Adrenalin others. This discussion gives us at least a basis for further work, better directed than heretofore by the physiopathology of the internal ear. Physiopathology is defined in Lippincott's New Medical Dictionary—J. F. T.).

SOCIETY REPORTS

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL, TUESDAY EVENING, FEBRUARY 26TH, AT 8:30 O'CLOCK.

The meeting was called to order by the President, Dr. Henry P. Jackson.

Present: Doctors: A. E. Baker, Jr., Banov, Beach, Buist, Burbage, Burn, Byrnes, Cain, Cannon, Chamberlain, Jackson, F. B. Johnson, Kollock, Lynch, McCrady, McInnes, Mitchell, Mood, E. F. Parker, Pearlstine, Phillips, Prioleau, Rhame, R. B. Rhett, W. P. Rhett, Richards, Rutledge, Scharlock, S. Simons, W. A. Smith, Speissegger, Taft, Townsend, Wild, R. Wilson, Miles. (36).

Guests: Dr. R. H. Lanning, U. S. N., and Dr. J. P. Palmer, of Charleston.

The minutes of the meeting of February 12th were read and confirmed.

Under Reports of Officers and Committees, the Secretary read a letter from Dr. J. H. Oakley, Surgeon of the United States Public Health Service, in which he directed the attention of the Society to a bill before Congress, the purport of which was to grant a pension to Mrs. Joseph Goldberger, the wife of the late Joseph Goldberger, of the United States Public Health Service. It was moved, seconded and carried that the Secretary be instructed to write a letter to the Senators of South Carolina and the Representative of this District urging the passage of this bill, in recognition of Dr. Goldberger's work in disease prevention.

Dr. J. F. Townsend, Chairman of the Committee to draw up resolutions of respect on the death of Dr. G. F. McInnes submitted the following:

George Fleming McInnes was born at Sullivan's Island on August 21, 1881. He started his education at Miss Clelia Porcher's School on Lamboll Street, going there until he was about eight years of age. When one day Miss Porcher noticed that he was absent, then she remembered that he had not been playing as usual for several days. Upon inquiry, she found that he was sick with an illness that had its start, probably, in a fall from a horse about three months before, when he landed on his feet.

This illness developed into Pott's Disease, which confined him to bed and to a rolling chair for years. But this affliction did not affect his cheerful disposition.

It was while confined to his rolling chair that he invented what is known as the coaster brake of a bicycle, but could get no recognition of the idea or invention.

It was at Mr. William Simons' School for Boys on Broad Street, Charleston, that he received his high school education.

He finally recovered his health sufficiently to run about at thirteen years of age, but he had a recrudescence of his illness, following the death of his mother.

When he could get around again, he helped his father for years in his veterinary work, where he learnt much of comparative anatomy that was of use in later life, both to himself and, in the discussion of medical subjects, to others.

When he was taken to the Medical College of South Carolina in 1904, to be registered, he was physically so small and handicapped that Drs. Austin Ball and Fraser Wilson, looking down at him said: "He is pretty small but maybe we can make something out of him." He received his degree of Doctor of Medicine in 1908.

His life is a potent illustration of the victory of the mental and the spiritual over the physical. We cannot really advance towards better things unless we are so impelled and sustained by higher purposes as not to allow physical limitations to circumscribe our attainments.

So we remember Dr. George Fleming McInnes for what he has done and we mourn him for what he has represented. For years his was nearly the only X-ray machine in Charleston that aided the doctors of this part of South Carolina, when human flesh obscured their vision. His success in X-ray work led to his election as a member of the Radiological Society of North America.

At his Biological Laboratory, besides working out some medical problems, he made for many years most of the Wassermann and biological tuberculosis tests for the doctors in and around Charleston. Also for many years his exceptional skill was frequently called upon for intravenous work of all sorts.

His skill in surgery and in his special work, on genito-urinary diseases, has won for him the respect of those who knew him. He was a member of the Urological Society of South Carolina and a Fellow of the American Medical Association, a member of the South Carolina Medical Society, the South Carolina Medical Association, and of the Tri-State Medical Society.

He was a man of strong convictions, was resourceful and unselfish, and of a pleasing personality. He was emphatic and frank spoken in his opinions and was a sincere friend. He had

a deep sympathy for the poor and his labors among them were extensive.

Success to be enduring must be written in thoughts and in acts of service to our fellow men for it is only in that way that men are remembered in the hearts of those who knew them;

SPARTANBURG

The regular monthly meeting of the Spartanburg County Medical Society was held Friday, April 26th at 8 P. M. at the General Hospital.

Dr. G. E. Thompson read a paper on, "Arterial Hypertension". This paper was discussed by Drs. Gantt, Collins, Bruce, Lindsay, Jeffries, Lancaster. The discussion was closed by Dr. Thompson.

Dr. W. B. Ward of Rock Hill read a paper entitled "Acute Appendicitis". This paper included the symptoms and reasons for rupture and treatment of ruptured appendices.

Both papers were very interesting, and also practical. Three guests were present: Drs. Ward and Desportes, of Rock Hill, and Dr. Bruce, of Greenville, Councillor of the Fourth District.

Dr. E. L. Patterson came in during the meeting and announced that he was leaving Spartanburg to do some work in Texas. Fifteen members were present.

There being no further business the meeting adjourned.

S. O. Black, President,
O. C. Bennett, Acting Secretary.

SPARTANBURG

The regular monthly meeting of the Spartanburg County Medical Society was held Friday, March 22, 1929, at the Spartanburg General Hospital at 8 P. M. About 40 members and visitors were present.

Some very interesting slides belonging to Dr. Kleinschmidt of the National Tuberculosis Association were shown.

Dr. E. T. Newell, of Chattanooga, Tenn., the speaker of the evening, read a very interesting and practical paper entitled, "The Symptoms and Treatment of Head Injuries". Dr. Newell also showed some lantern slides of x-ray films and also of photographs of patients. The paper was discussed by Dr. Mauldin, of Greenville.

Visitors from Greenville, Union, and Tryon were present.

There being no further business the meeting adjourned.

S. O. Black, President.
W. M. Sheridan, Sec.-Treas.

PROCEEDINGS AT THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL, TUESDAY EVENING, APRIL 23, 1929, AT 8:30 O'CLOCK.

The meeting was called to order by the President, Dr. Henry P. Jackson.

Present: Doctors: Allen, A. E. Baker, Jr., Ball, Banov, Beach, Beckman, Bowers, Buist, Burn, Byrnes, Cain, Cannon, Cathcart, Chamberlain, de Saussure, Finger, Heidt, Jackson, F. B. Johnson, Kollock, LaRoche, Lynch, McCrady, McInnes, Maguire, Martin, Mazyck, Mitchell, Mood, O'Driscoll, Pearlstine, F. R. Price, W. H. Price, Ravenel, Rhame, W. M. Rhett, Richards, Rutledge, Scott, W. A. Smith, Taft, Townsend, Waring, I. R. Wilson, Robert Wilson (45).

Guests: Dr. R. H. Lanning and Dr. A. P. Morton, of the U. S. Navy. The minutes of the meeting of April 9th were read and confirmed.

The Secretary presented the application of Dr. J. P. Palmer for membership in the Society by transfer from the Fulton County Medical Society of Atlanta, Georgia. Dr. Palmer's application contained a statement from the President and Secretary of the Fulton County Society showing that he was in good standing. On motion, duly seconded, Dr. Palmer was elected unanimously by ballot.

Under Reports of Officers and Committees, Dr. G. McF. Mood, Chairman of the Board of Commissioners, made the following report: "Recently a room at Riverside Infirmary has been endowed. The total amount of the endowment is $25,000.00. On April 11th, those establishing the endowment paid to the Chairman of the Board $11,000.00, with the written agreement that the remainder, $14,000.00, will be paid on or before January 1, 1930. The $11,000.00 was paid in checks, which were turned over to the Board of Finance. The memorial when complete established will be known as 'The Emma Worrell Lowber Memorial Room'." It was moved, seconded, and carried, that the endowment of the room at the Riverside Infirmary be accepted, and that Dr. Mood be empowered to have executed a deed of trust, the same to be turned over to the Board of Finance.

Dr. R. S. Cathcart, Chairman of the Board of Finance, submitted the following report: "The Board of Finance begs to report that they received on April 12th, 1929, from Dr. G. McF. Mood, Chairman of the Board of Commissions of the Roper Hospital, a check for Eleven Thousand Dollars ($11,000.00) to be credited to the Emma Worrell Lowber Memorial. The Deed of Trust regarding this Fund we understand will be delivered when the remainder of the Fund (amounting to $14,000.00) is paid over to the Board of Commissioners. The Board of Finance has in-

vested the $11,000.00." It was moved, seconded and carried that this be received as information.

Dr. J. W. Burn, Chairman of the Committee on Charity Services, read the report from this committee. (See file "Charity Services"). On account of the lateness of the hour, the President suggested deferring discussion of this report until after the Scientific Meeting.

The Secretary read a letter from Mr. F. O. Bates, Superintendent of the Roper Hospital, inviting the members to inspect a new private department which has recently been opened on the upper floor of the Roper Hospital, in quarters previously occupied by the interne staff.

The Secretary also read a letter from Mrs. A. E. Baker, President of the Womens Auxiliary of the Medical Society, outlining a program of entertainment for the State Auxiliary, and urging the wives of the members of this Society to take part in the entertainment.

At 9:00 P. M. the Scientific Program was called.

Under Case Reports, Dr. J. Austin Ball reported a case of spontaneous pneumothorax developing in a young adult, who was apparently in good health. He showed an X-ray picture which proved the correctness of the diagnosis and, in addition, showed that fluid had developed on the affected side.

The Symposium on Tuberculosis was then taken up.

Dr. M. W. Beach read a paper on Tuberculosis in Childhood, and exhibited lantern slides.

Dr. Robert Wilson discussed in a short address the Early Diagnosis of Pulmonary Tuberculosis.

Dr. W. Atmar Smith gave a short talk on Hilus Tuberculosis and reported several cases, exhibiting X-ray pictures of the same.

Dr. Kenneth H. Lynch discussed the pathogenesis of tuberculosis.

Dr. F. B. Johnson presented the newer phases of laboratory procedures in the diagnosis of tuberculosis.

Dr. R. B. Taft, in a short paper, discussed the value of the X-ray in the diagnosis.

There was no discussion.

The Business Meeting was resumed at the conclusion of the Scientific Program.

The President stated that the report of the Committee on Charity Services would now be discussed. Several motions were submitted for the purpose of postponing the discussion. The following, embodying several amendments, was seconded and carried: Moved that the discussion of the Report of the Committee on Charity Services be postponed until the next regular meeting of the Society, and be placed on the program as a special order of business, and that the Secretary be instructed to send to each member of the Society a copy of this report.

Dr. J. H. Cannon, Treasurer, made the following report in regard to Dr. E. H. Barnwell's dues—he stated that he had written to Dr. Barnwell, but had received no reply. It was moved, seconded and carried that the matter concerning Dr. Barnwell and his dues to this Society be referred to the Board of Censors for investigation and report.

Dr. J. H. Cannon, Treasurer, reported that Dr. H. H. Plowden, who had been dropped for nonpayment of dues, had recently paid his indebtedness and was eligible for re-election for membership to the Society. He then proposed Dr. Plowden's name for re-election for membership, and on ballot Dr. Plowden was re-elected.

Dr. C. McF. Mood, representing the Medical History Club, invited the members of the Society to the unveiling of a tablet in memory of Dr. E. L. Jagar. This tablet is being presented to the Hospital by the members of the Medical History Club.

There being no further business, the meeting adjourned.

W. Atmar Smith, M. D., Secretary.

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL, TUESDAY EVENING, MARCH 26, 1929, AT 8:30 O'CLOCK.

The meeting was called to order by the President, Dr. Henry P. Jackson.

Present: Doctors: Beach, Beckman, Buist, Byrnes, Cannon, Chamberlain, Jackson, Kollock, Maguire, Plowden, F. R. Price, Prioleau, Rhame, W. P. Rhett, Rutledge, W. A. Smith, Waring, Robert Wilson. (18).

Guests: Dr. R. H. Lanning, U. S. N., and Dr. Prescott, U. S. N.

The minutes of the meeting of March 12th were read and confirmed.

There was no business.

The Scientific Meeting was called at 9:00 P. M.

Under Surgical Case Reports, Dr. J. S. Rhame reported a case of mesenteric cyst, successfully diagnosed and removed at operation. The report of the pathologist, however, showed that this cyst was a low grade type of sarcoma.

Dr. Rhame also reported a case of gangrene of the intestine, due to strangulation.

These cases were discussed by Drs. D. L. Maguire, W. H. Prioleau and A. J. Buist, Dr. Rhame closing.

Under Medical Case Reports, Dr. O. B. Chamberlain reported a case of Potts Disease, involving the lumbar spine and resulting in spastic paraplegia, in which, under ten months rest in a Bradford frame, return of motion and sensation had been achieved. This case was discussed by Dr. Prioleau.

There being no further business, the meeting adjourned.

W. Atmar Smith, Secretary

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL, TUESDAY EVENING, APRIL 9, 1929, AT 8:30 O'CLOCK.

The meeting was called to order by the President, Dr. Henry P. Jackson.

Present: Doctors: Ball, Banov, Bowers, Buist, Burbage, Byrnes, Cannon, Cathcart, Chamberlain, Deas, Jackson, F. B. Johnson, LaRoche, Lynch, McCrady, Maguire, Mitchell, Mood, O'Driscoll, Pearlstine, Plowden, Prentiss, F. R. Price, W. P. Rhett, Richards, Rutledge, Scott, W. A. Smith, Waring, R. Wilson, Miles. (31).

Guests: Dr. R. H. Lanning and Dr. A. P. Morton, of the U. S. Navy.

The minutes of the meeting of March 26th were read and confirmed.

As no business came up for discussion, the Society took a recess until 9: 00 P. M., when the Scientific Program was called.

The President introduced Mr. Robert O. Jones, of the Gorgas Memorial Institute, who gave an interesting address on Medical Economics.

Under Case Reports, Dr. W. M. Rhett reported a case of Achondroplasia. The infant's mother had the same infection and the baby had been delivered by caesarian section.

Dr. J. I. Waring reported a case of cretinism, and illustrated with a chart the rate of growth and development under treatment with thyroid extract.

These reports were discussed by Doctors Ball, LaRoche, and others.

There being no further business, the meeting adjourned.

W. Atmar Smith, Secretary.

THE RIDGE MEDICAL SOCIETY MEETS

The Ridge Medical Association met the fifteenth of April. Dr. Timmerman exhibited cases of ascitis and lymphangitis which were examined and discussed. Dr. A. R. Nicholson read an interesting paper on the management of normal labor. Dr. Julius H. Taylor gave an instructive address on acute osteo myelitis.

The Society and its guests were entertained at luncheon by the Ladies Auxiliary in the home of Dr. and Mrs. W. P. Timmerman.

Short sketches of some of the deceased doctors of this section were read by Dr. W. P. Timmerman. He also read a short sketch of Dr. J. W. Geiger, who is now living and is about ninety-seven years old.

Notwithstanding the inclemency of the weather the meeting was well attended. Saluda had one hundred per cent attendance. All of the members of the Ladies Auxiliary and of the Society attended.

Our Councilor Dr. Harmon and Drs. H. Wyman and E. W. Barron, of Columbia, met with us and entered into our discussions.

MINUTES

MINUTES
EIGHTY-FIRST ANNUAL SESSION—THE SOUTH CAROLINA MEDICAL ASSOCIATION

Charleston, S. C., May 7, 8, 9, 1929

WEDNESDAY, MAY 8

The South Carolina Medical Association met in the ballroom of the Francis Marion Hotel, Charleston, on Wednesday, May 8, 1929, and was called to order at 9:20 a. m. by the President, Dr. R. E. Hughes, of Laurens.

The invocation was said by the Reverend William Way, D. D., rector of Grace Church, Charleston.

The Honorable Thomas P. Stoney, Mayor of Charleston, delivered an address of welcome, and Dr. Henry P. Jackson, President of the Medical Society of South Carolina, welcomed the Association on behalf of the Society. The addresses of welcome were responded to by President Hughes.

Dr. Hughes then read his President's Address.

Dr. Baxter Haynes, Spartanburg, presented to the Association, "In memory of our dead comrades," a gavel made of wood from Orente Province, Cuba, which was received on behalf of the Association by Dr. C. W. Kollock, Charleston.

The report of the Committee on the Sims Memorial was read by Mrs. Daisy Lee Stuckey. On motion of Dr. W. P. Timmerman, a rising vote of thanks was given to Mrs. Stuckey, and the committee was continued indefinitely.

Dr. Roe E. Remington, Director of Laboratory, South Carolina Food Research Commission, Medical College of the State of South Carolina, Charleston, read a paper entitled "Vegetable Food and the Goiter Problem," which was discussed by Drs. Wm. Weston, Columbia; Ben F. Wyman, Columbia; F. H. McLeod, Florence; N. B. Heyward, Columbia; by Dr. Remington; by Drs. Francis L. Parker, Charleston; Sam Orr Black, Spartanburg; T. N. Dulin, Clover, by Dr. Weston and President Hughes; by Dr. E. F. Parker, Charleston, who offered a motion to congratulate Dr. Wm. Weston upon his work in food research and nutrition; by Dr. Black again; and by Dr. Remington in closing. Dr. Parker's motion was seconded and carried.

Dr. E. A. Hines, Seneca, read a paper entitled "Some Observations on First Reported Cases of Malta Fever in South Carolina."

The morning session then adjourned.

AFTERNOON SESSION

The Association met at two-thirty in the same place and was called to order by the President.

The paper of Dr. Hines was discussed by Dr. W. K. Lewis, State Veterinarian and Director Clemson College Livestock Sanitary Department, Columbia; by Dr. H. M. Smith, Director State Board of Health Laboratory, Columbia; by Drs. B. K. McInnes, Charleston; Ernest Cooper, Columbia; T. N. Dulin, York; and by Dr. Hines and Dr. Lewis in closing.

Dr. R. B. Taft, Charleston, showed a moving-picture film on "Osgood-Schlatter's Disease"; and this subject was discussed by Drs. A. J. Buist, Charleston, and J. Warren White, Greenville, and William A. Boyd, Columbia.

A paper entitled "Peptic Ulcer Observations Based on Ninety-three Cases" (illustrated by lantern slides) was read by Dr. Sam Orr Black, Spartanburg.

Dr. J. H. Taylor, Columbia, made an address on "Certain Surgical Problems of the General Practitioner."

A paper entitled "Review of Findings in One Hundred Cases of Head Injury" was read by Dr. D. L. Maguire, Charleston, and was discussed by Drs. Olin B. Chamberlain, Charleston; T. E. Bowers, Charleston; and J. H. Taylor, Columbia; and in closing by Dr. Maguire.

Dr. J. R. Young, Anderson, read a paper entitled "Some Uses of Magnesium Sulphate in Surgical Practice," which was discussed by Drs. J. S. Rname, Charleston, and George H. Bunch, Columbia; and by Dr. Young in closing.

Dr. Roger G. Doughty, Columbia, read a paper on "The Diagnosis and Management of Heart Wounds," which was discussed by Dr. LeGrand Guerry, Columbia, Dr. D. L. Maguire, Charleston, and by Dr. Doughty in closing.

The afternoon session then adjourned.

EVENING SESSION

The Medical Association of South Carolina met at eight p. m. in the Victory Theater, with Dr. R. E. Hughes, President, in the chair.

Dr. Walter E. Dandy, John Hopkins Hospital, Baltimore, Md., read a paper on "Early Diagnosis and Treatment of Brain Tumors."

Dr. Henry P. Wagener, Mayo Clinic, Rochester, Minn., read a paper entitled "The Significance of Retinitis in Hypertension."

A motion picture film showing the growth and behavior of cancer cells, secured by the State Cancer Committee, was shown.

The evening session then adjourned.

THURSDAY, MAY 9

The South Carolina Medical Association met in the ballroom of the Francis Marion Hotel at nine-thirty a. m., with Dr. J. R. Young, First Vice-President, presiding.

A pathological conference was conducted by Drs. Kenneth M. Lynch and Robert Wilson, of Charleston.

Drs. F. H. McLeod and P. D. Hay, of Florence, conducted a surgical clinic.

The paper of Dr. Roy P. Finney, Spartanburg, on "Some Diagnostic and Therapeutic Problems," was read by title.

Dr. W. R. Mead, Florence, read a paper entitled "Aplastic Anemia," which was discussed by Dr. V. P. Sydenstricker, of Augusta, Ga.

The paper of Dr. G. T. Tyler, Greenville, entitled "Tuberculosis of the Stomach, with Report of a Case," was read by title.

Dr. J. Warren White, of Greenville, conducted an orthopedic clinic, presenting cases of obstetric paralysis, congenital deformity of the feet, congenital and pathological dislocation of the hip, etc.

Dr. Hugh Smith, Greenville, presented several cases in a medical clinic.

Dr. Marion H. Wyman, Columbia, read a paper entitled "Foreign Bodies, Including a Revolver Bullet, Obstructing the Urethra," illustrated by lantern slides.

AFTERNOON SESSION

The Association met in the ballroom of the Frances Marion Hotel at two-thirty p. m. with Dr. R. E. Hughes, President, in the chair.

Dr. A. F. Burnside, Columbia, read a paper entitled "Controllable Spinal Anesthesia," which was discussed by Drs. Sam Orr Black, Spartanburg; J. H. Young, Columbia; H. K. Jenkins, Mullins; and by Dr. Burnside, in closing.

Dr. Sam Orr Black, Spartanburg, offered a resolution of thanks to the members of the local medical society and others, as follows:

"Resolved, that the Medical Association of South Carolina express its thanks to the members of the local medical society and especially the local committee on arrangements for the good work they have done in preparation for the meeting of the Association; to the hotels for the courtesies rendered; to the press for the full and fair accounts of the proceedings of our meetings; to the ladies of Charleston for the entertainment provided for the visiting ladies; to Dr. Kenneth M. Lynch and R. S. Cathcart for securing the moving pictures showing the growth of the normal cell and the cancer cell; to Dr. C. W. Kollock for securing the privilege of the use of the country club by visitors; and to all others who have participated in making the meeting successful."

The motion to adopt this resolution was seconded and carried.

Dr. H. W. deSaussure, Charleston, read a paper on "Toxemia of Pregnancy," which was discussed by Drs. L. A. Wilson, Charleston; R. E. Seibels, Columbia; J. F. Townsend, Charleston; and by Dr. deSaussure in closing.

Dr. R. E. Seibels, Columbia, read a paper entitled "History of the Vaginal Speculum," which was discussed by Drs. L. A. Wilson, Charleston, and J. Van de Erve, Charleston.

Dr. J. Van de Erve, Charleston, read a paper entitled "The Physiology of the Kidney, with Clinical Application."

Installation of President

President Hughes asked Dr. Seibels and Dr. deSaussure to conduct the President-Elect, Dr. C. R. May, to the chair.

Dr. May: I am very happy and filled with gratitude to all of you for your having elected me to the highest honor that this society can confer upon a member of it. I do not know how to express my appreciation. I have been coming to the South Carolina Medical Association for thirty-two years and have seen it grow from a small gathering of earnest workers to this large and creditable body. I assure you that to the best of my ability I will cooperate with you in every way possible to continue the work of this Association, and I hope that I shall see each one of you in Florence next year.

President Hughes: I present to you this gavel, sir. The society is delighted to have it in the possession of such a man and delighted to see a face that is more pleasing than that of the past president.

Secretary Hines: We have a member over here, Dr. S. T. D. Lancaster, of Spartanburg, who tells me he has been coming for fifty years. Dr. Lancaster, will you please stand up?

Dr. Lancaster: I am not much of a speaker, sir. I see progress, sir, I see great progress. I see some things we never thought of seeing, and it is always a delight for me to come and learn from the younger men how to live, how men ought to live. We have had character here all our lives; we have character here in this association today unsurpassed by other states where I have had the opportunity of attending medical associations.

President Hughes: We are glad to have you with us today, Dr. Lancaster, and we appreciate your faithfulness to organized medicine.

I see Dr. Jackson, President, Medical Society of South Carolina and want to say, although we have expressed our thanks publicly, that we do feel very grateful because Charleston, as it al-

ways does, has treated us finely. It could not be better, and if you had had a good president, sir, there is no telling what it would have been.

Dr. H. P. Jackson: I appreciate what you say, Mr. President, and am very glad for my good fortune in being present when we have this meeting in Charleston. We are very grateful for your kind expressions, sir, and we are glad you have enjoyed being with us in Charleston.

There being no further business, the Association adjourned sine die.

MINUTES—HOUSE OF DELEGATES—THE SOUTH CAROLINA MEDICAL ASSOCIATION

Charleston, S. C.

TUESDAY, MAY 7, 1929

The House of Delegates of the South Carolina Medical Association met in the ballroom of the Francis Marion Hotel, Charleston, on Tuesday, May 7, 1929, at eight-forty p. m., and was called to order by the President, Dr. R. E. Hughes.

Dr. J. T. Taylor, Adams Run, Chairman, presented the report of the Committee on Credentials.

On motion of Dr. E. A. Hines, Secretary-Treasurer, Dr. J. R. McCormick was seated as the delegate from Bamberg County.

President's Address

Dr. R. E. Hughes, Laurens

Gentlemen of the House of Delegates, your distinguished secretary (and I say that advisedly) has been so used in the past to having the president make a speech that he has me down for an address. That is very kind of him, but my repertoire is very, very limited. I have very little ammunition, and all I have I am trying to save for tomorrow. The truth of the business is that to make a speech you have to get up on your legs, and you have to have language and sometimes liquor. I have not either. Therefore the speech will be dispensed with, except to say in passing that in my mind the most important thing for the medical profession in this and other states is organization. If you remember how many organizations are being started by laymen to get a cheaper grade of medical care and how the State is rather infringing upon the doctor, you will realize that unless we organize we shall be owned by the layman and probably hired by him. It is a very distasteful thought. If organization ever had a time it is now; everything that has succeeded has been organized; it is a day of organization. We must stand together fairly and squarely and give justice; the public expects it and will require it. That is all I have to say tonight.

Dr. E. A. Hines read his report as Secretary-Treasurer. On motion of Dr. C. F. Williams, Columbia, the report was adopted and a vote of thanks was given to Dr. Hines for his splendid report.

Dr. S. E. Harmon read a report of the Council and then made the following supplementary report:

Report of Council

Dr. S. E. Harmon, Chairman

Your Board of Councilors met this afternoon, and nothing of a great deal of interest came up. There seems to be a general condition of harmony prevailing over the state.

We would like to call attention to the Journal. Occasionally someone personally offers some criticism to me. We think that the Journal is improving from time to time, and we think at the present time we have as good a journal as there is in any state of our size and population. Each time that I have had a little personal criticism referable to the Journal I have made this statement—that we, the medical profession, are the ones to make the journal. Paper will carry whatever you place upon it, and unless the men cooperate and produce the material to make a journal of course it can not be done.

We wish to call attention to the fact that within the last two years our Secretary-Editor has been able to increase the advertising income to the extent of about $300. That is steadily increasing.

Your Board of Councilors also discussed in their meeting the financial condition with reference to paying the expenses of the two delegates to the American Medical Association, which meets, as you know, on the Pacific Coast. Nothing definite was done about that. The suggestion was made that probably some of the men are going anyway and if so, if we knew who they are, we could elect them as delegates to represent the Medical Association of South Carolina and it would not cost us as much as it would otherwise. Again, the subject was discussed of the advisability of selecting probably some man who is a railroad surgeon and who might get his transportation free. I just mention that because if there is anyone who contemplates going such a scheme might be worked out.

A word about organized medicine. You will note from our reports that a large percentage of the men in the different counties are eligible that are not members of any association. We have put forth feeble efforts and as much as we thought we could have tried to stimulate more interest, but up to the present time we have not succeeded very well.

Another subject came up for discussion that has been discussed before—free clinics at different points in the state sponsored by some lay organization that we think should be handled by the

medical profession. It was suggested that each county association select a committee to meet and work with all organizations seeking work from the medical profession on charity cases. Such work ought to be an should be sponsored by the medical profession, and the profession ought not to permit (if you will accept that word) anyone's being brought in from a foreign county or from any other place into a certain location unless it is with the consent of the local association. We think the family physician should be the judge for his people as to what they need and that it is for him to advise them to whom to go in the event they need special care and attention. The family physician should be in touch with his clientele, and we think that he is the one to first examine his people to find out what they need and to advise them where and how to get such special work as they may need.

This report was discussed by Drs. R. S. Cathcart, Charleston; C. W. Kollock, Charleston; W. P. Timmerman, of Batesburg; and J. S. Fouche, Columbia.

Reports of Councilors

The following reports were presented and accepted:

First District—Dr. J. H. Cannon.
Second District—Dr. S. E. Harmon.
Third District—Dr. T. L. W. Bailey.
Fourth District—Dr. R. C. Bruce.
Fifth District—Dr. J. R. DesPortes.
Sixth District—Dr. C. R. May.
Seventh District—Dr. T. R. Littlejohn.
Eight District—Dr. J. E. Warnock.

On motion of Dr. W. P. Timmerman, the Secretary-Treasurer was authorized to reimburse Dr. C. R. May, Councilor Sixth District, for expenses incurred for attorneys' fees.

Reports of Committees

Dr. Hugh Smith, Greenville, Chairman, presented the program as the report of the Committee on Scientific Work, stating that, in accordance with request of many members, one morning is devoted to clinics. Dr. Smith thanked Dr. Kenneth M. Lynch, Chairman of the Committee on Arrangements, for his help in getting up the program.

The report of the Committee on Legislation was presented by Dr. Marion H. Wyman, Columbia, Chairman, and was discussed by Drs. J. W. Jervey, E. F. Parker, and W. P. Timmerman.

Dr. J. H. Cannon, Charleston, Chairman, read the report of the Committee on Constitution and By-Laws, which was discussed by Secretary-Treasurer Hines, Dr. Kenneth M. Lynch, and Dr. S. E. Harmon, Chairman of the Council. On motion of Dr. Parker, the report of the committee, including the changes in the committees, was adopted.

Dr. G. T. Tyler, Chairman, read the report of the Committee on Health and Public Instruction, which includes a recommendation that the Association meet in Columbia in 1930. Dr. Marion H. Wyman, Columbia, extended an invitation to the Association to meet there. Dr. E. F. Parker, Charleston, moved that the Committee's recommendation be adopted, and this motion was seconded by Dr. Hugh Smith, Greenville, and was discussed by Dr. W. P. Timmerman. Dr. R. S. Cathcart offered a substitute motion that the report and recommendation of the Committee be referred to a committee of five to consider and report to the House of Delegates. The substitute motion was seconded by Dr. S. E. Harmon and was adopted. The President appointed the following as the committee to consider and report on the Committee's recommendation: Dr. F. H. McLeod, Florence, Chairman; Dr. Robert Wilson, Charleston; Dr. W. P. Timmerman; Dr. S. E. Harmon, Columbia; and Dr. Davis Furman.

Dr. George Neel, Chairman, Greenwood, read the report of the Committee on the Study and Prevention of Venereal Diseases, which was discussed by Dr. Marion H. Wyman.

The report of the Committee on Military Affairs was read by Dr. C. W. Kollock, Chairman.

The report of the Committee on Necrology was read by Dr. William A. Boyd, Columbia, Chairman, the members standing during the reading of the report.

Dr. G. McF. Mood, Charleston, Chairman, read the report of the Committee on Medical Education.

Dr. G. McF. Mood, Charleston, Chairman, read the report of the Committee on Medical Education.

Reports

Dr. Robert Wilson, Charleston, President, read the report of the State Board of Health.

The report of the State Board of Medical Examiners was read by Dr. A. Earle Boozer, Colmbia, Secretary.

The report of the Delegates to the American Medical Association was presented by Dr. J. H. Cannon, Charleston.

Report of Special Committee

Dr. F. H. McLeod, Chairman, reported as follows on the recommendation contained in the report of the Committee on Health and Public Instruction:

"The special committee thinks the recommendation is very valuable but believes it unwise to adopt it at this time. The legislature has been fairly attentive to the recommendations of the South Carolina Medical Association and of the State Board of Health, and we believe such a meeting would be unwise. We commend the re-

port very highly. We recommend that informing the members of the legislature be made a local proposition between each county society and its own representative and senator; and we suggest that the Secretary of the State Association notify each county society and ask it to have a meeting to which the senator and representative from that county be invited and at such meeting the county society inform them as to the activities of the State Medical Association and the State Board of Health and present our needs to them."

On motion of Dr. G. McF. Mood, Charleston, seconded by Dr. C. W. Kollock, the report of the special committee was adopted.

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Dr. J. H. Taylor, Columbia, the Chairman of the Special Committee on the Sims Memorial, not being present, Secretary Hines asked to have the report deferred until the general session on Wednesday morning.

New Business

Dr. E. E. Epting, Anderson, moved that the House of Delegates adopt resolutions indorsing the work of the South Carolina Food Research Commission and the South Carolina Natural Resources Commission, with special reference to Dr. William Weston's work in food analysis. This motion was seconded and carried.

Secretary-Treasurer Hines read the following telegram:

"Wlliamston, S. C., May 7, 1929.

Dr. R. E. Hughes,

Francis Marion Hotel, Charleston, S. C.

I am in bed recovering from two weeks' illness but not well enough to be present. Please present my affectionate regards to the House tonight. This will be the third meeting I have ever missed.

Frank Lander."

Dr. W. P. Timmerman moved that the Secretary be instructed to send greetings to Dr. Lander and regrets that he cannot be present, which motion was seconded and carried.

Dr. Hugh Smith, of Greenville, offered a resolution and moved its adoption, the motion being seconded by Dr. R. M. Pollitzer. After incorporation of an amendment suggested by Dr. Kenneth M. Lynch, the resolution was adopted, as follows:

"Inasmuch as several hours are consumed with the reading and hearing of various committee reports at the meeting of the House of Delegates, therefore

Be it resolved that in lieu of reading the detailed reports to the House of Delegates all such reports be sent to the Secretary of the State Association one month or more prior to the annual meeting and that the Secretary of the State Association furnish copies to the secretary of each county society, so that the delegates may be familiar with these reports, thereby greatly conserving time and allowing the House of Delegates to devote its energies to constructive measures."

On invitation of Dr. F. H. McLeod, Florence, it was voted to hold the next annual meeting in Florence.

Election of Officers

The following nominations for President were made:

Dr. J. Roddy Miller, of Rock Hill, by Dr. Simpson. Seconded by Dr. Dulin and Dr. W. P. Timmerman.

Dr. G. P. Neel, of Greenwood, by Dr. Blake.

Dr. C. R. May, of Sumter, by Dr. Jennings.

Dr. May was elected on the first ballot.

Other officers were elected as follows:

First Vice-President—Dr. G. P. Neel, Greenwood.

Second Vice-President—Dr. J. B. Johnson, St. George.

Third Vice-President—Dr. J. F. Davis, Clinton.

Secretary-Treasurer—Dr. E. A. Hines, Seneca (re-elected).

Councilors:

First District—Dr. J. H. Cannon, Charleston (re-elected).

Third District—Dr. T. L. W. Bailey, Clinton (re-elected).

Fith District—Dr. J. R. DesPortes, For Mill (re-elected).

Sixth District—Dr. M. R. Mobley, Florence (to succeed Dr. C. R. May, who was elected President).

Seventh District—Dr. T. R. Littlejohn, Sumter (re-elected).

Members of State Board of Medical Examiners:

Dr. J. T. Taylor, of Adams Run, and Dr. Frank Lander, of Williamston, were re-elected to succeed themselves.

There being no further business to come up, the House of Delegates then adjourned **sine die.**

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Charles R. May, M. D., President South Carolina Medical Association, 1929-30.

The Journal

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EDITORIAL

OUR PRESIDENT, DR. CHARLES R. MAY

Dr. Chas. R. May was born and reared in Yorkville, S. C., the son of Dr. John May and Caroline Raysor May. Like his father, who was a prominent physician and surgeon of Civil War and post-war days, and a member of the House of Representatives, Dr. May has achieved success in the practice of medicine and in other fields of endeavor.

Dr. May was educated in the public schools of Yorkville and Kings Mountain Military Academy, after which he studied medicine at the old Medical College of Virginia and the South Carolina Medical College, from which he graduated in 1897. He joined the State Medical Association immediately and began practice at Blenheim, Marlboro County, later moving to Bennettsville, where he has enjoyed a very large and successful practice. In 1918, Dr. May completed a course in surgery of the throat at the New York Post-graduate School. He has given special attention to this work since then, although continuing in active general practice. He is on the active staff of the Marlboro County General Hospital in Bennettsville, is a past president of the Marlboro County Medical Society and the Pee Dee (Sixth District) Medical Association, and a member of the Tri-State, Southern, and American Medical Associations. He has faithfully and ably served the Sixth District of the South Carolina Medical Association as Councilor for about sixteen years, from which office he was elevated to the Presidency.

Dr. May is a member of many fraternal orders, a Mason, Knights Templar, Shriner, and was chief of the medical staff of Omar Temple during 1928. He is a past Chancellor Commander of his lodge Knights of Pythias. He is a Presbyterian by faith and a member of the Board of Deacons of the First Presbyterian Church of Bennettsville.

Dr. May was first married in 1899 to Miss Nelle Matheson of Marlboro County to which union there were born five children. He was again married in 1920 to Miss Eloise Wright of Cheraw and Columbia. To this union there have been two children.

Our next president has been a leader in the social, business, and professional life of his community for many years. He is a man of remarkable talent, great personality, and splendid ability. While still very active in practice, he will visit the constituent societies of the State Medical Association, and will, no doubt, have some ideas to offer for the betterment of organized medicine in South Carolina.

SCHOLARSHIPS AT PEDIATRIC SEMINAR

We are informed that there are a number of vacant scholarships from South Carolina at the Southern Pediatric Seminar, Saluda, N. C., the latter part of July and the early part of August. This is a wonderful opportunity to combine serious study with a vacation in one of the most delightful spots in the United States. These scholarships provide sufficient funds to take care of the tuition fees and board for a period of two weeks. It is preferred that applicants come from the smaller towns and rural districts. These appointments are subject to the approval of the Secretaries of the various State Medical Associations. Applications may be made direct to Dr. D. L. Smith, Registrar, Saluda, N. C.

CONFERENCE OF MEDICAL MEN TO PROMOTE PUBLICITY OF IODINE CONTENT OF SOUTH CAROLINA GROWN PRODUCTS

A wonderful meeting was held at Columbia, June 20, pursuant to a call of Dr. F. H. McLeod of Florence for the purpose of discussing ways and means by which the medical profession could promote the publicity of the high iodine content of our home grown food products. Elsewhere in this issue we give fuller details. The Journal has consistently supported the idea to the effect that the medical profession should be the real leaders in this movement. The evidence appears to be sufficiently conclusive to warrant every doctor in South Carolina in getting solidly behind the whole proposition both from a scientific and commercial standpoint. Too often, scientific discoveries do not receive the full approbation of those who should be the first to acknowledge their value. In this instance we are pleading for a speedy acknowledgement of a great opportunity to serve not only the State but the nation.

ORIGINAL ARTICLES

THE SIGNIFICANCE OF RETINITIS In HYPERTENSION*

Henry P. Wagener, M. D., Section on Opthalmology, The Mayo Clinic, Rochester, Minnesota

The essential hypertension or hyperpiesia of Allbutt is now almost universally recognized as a clinical entity distinct from nephritis. Evidence is accumulating also to show that the more severe and more rapidly progressing types of hypertension have their origin, or at least their earliest manifestations, in a diffuse lesion of the vascular system of which the renal involvement is only a part and not, as earlier supposed, the cause. Changes in the brain, heart, and retina play a prominent part in the symptomatology of the severe types of hypertension. The lesions in the retina are readily accessible to study and afford valuable information for differential diagnosis, for the observation of the progress of the disease, and for prognosis. From a somewhat more theoretical view point, they offer valuable suggestions on the pathogenesis of the cerebral and renal complications of hypertension.

The basic lesion observed in the retina in cases of hypertension, around which all the other opthalmoscopic observations can be grouped, clinically has been termed retinal arteriosclerosis. The clearest and most universally applicable description of the opthalmoscopic evidences of sclerosis of the retinal arteries is to be found in the writings of Gunn, who described them in cases of general arteriosclerosis at a time when the sphygmomanometer was not in general use. The retinal branches of the central artery of the retina are in reality small arteries or arterioles, and sclerosis in them can readily be shown, in studies by biopsy and at necropsy, to be more closely associated and more comparable in degree with sclerosis of the small arteries and arterioles throughout the body than with sclerosis of the larger vessels. It is of interest, however, that in cases of progressive (malignant) hypertension, the clinical degree of sclerosis of the retinal arterioles corresponds closely with the estimated grade of palpable peripheral sclerosis which is considered to be hypertrophy of the wall of the artery rather than atheroma.

It is obvious that, particularly as a result of local inflammatory lesions, there may be present in the arterioles of the retina sclerosis which is not to be looked on as a part of diffuse sclerosis of the arterioles of the body. In most cases it is possible to differentiate these types of sclerosis. If the hypertension type of sclerosis alone is considered, it is probable that the statement of O'Hare and Walker, based on clinical observations, is correct: that sclerosis of the retinal arteries always indicates hypertensive disease, whether or not the blood pressure is found to be elevated at the time of examination. Their views are supported by the results of study in a group of 137 cardiac cases studied during life and at necropsy by Yater and Wagener.

The frequency with which sclerosis of the retinal arterioles is found in patients with hypertension depends largely on the group studied. Thus of 200 unselected cases of hypertension, in many of which the high blood pressure was discovered only incidentally, there was sclerosis of the retinal arterioles in 58 per cent. In sixty of these cases, symptoms referable to the hypertension were present; in 70 per cent of them, and in more than 90 per cent of another group of cases in which death occurred from hypertensive cardiac disease, there was sclerosis of the retinal arterioles. In other cases which it has been possible to observe over longer periods, it has been demonstrated that appearance of or increase in the severity of the sclerosis has accompanied progression of the hypertension with the development of cerebral, cardiac or renal symptoms. Thus, observation of the retinal arterioles often can afford a means of classifying the hypertension as progressive or non-progressive before the appear-

*Read before the South Carolina Medical Association, Charleston, May 7 to 9, 1929.

ance of serious complications either in the retina or elsewhere in the body.

For the differential diagnosis during life of primary nephritis and primary hypertension, the presence of sclerosis of the retinal arterioles is, I believe, of paramount importance. In glomerulonephritis, prior to the onset of retinitis, the retinal arterioles are normal. If sclerosis of the hypertension type is present in the arterioles of the retina it is present in the arterioles throughout the body. Keith, Wagener and Kernohan have demonstrated this adequately by biopsy of the voluntary muscles, and at necropsy in practically all the organs of the body. The changes in the vessels of the kidney are the same as those in other tissues and the involvement of the glomeruli is definitely secondary too the vascular lesions.

Associated with sclerosis of the arterioles in cases of hypertension, various lesions occur in the retina which have been loosely grouped under the term "retinitis." From among these, several entities can be separated, each of which has somewhat different local pathogenic manifestations, and consequently a different prognostic import. Besides scattered hemorrhages in the retina, there may be thrombosis of the retinal veins, retinitis of arteriosclerosis, retinitis of benign hypertension, and retinitis of malignant hypertension.

From time to time, in a case of hypertension, isolated linear or flame-shaped hemorrhages occur in the nerve-fiber layer of the retina. They are probably caused by transitory rises of local blood pressure and are not of particular significance. Small round hemorrhages in the deeper layers of the retina, however, probably indicate a degree of capillary dysfunction and have much the same significance as the milder types of retinitis.

Thrombosis may occur in the central vein of the retina or in any of its branches. The picture of thrombosis of the central vein is that of the well-known "hemorrhagic retinitis," with hemorrhages diffusely scattered throughout the visible part of the fundus. Thrombosis of a tributary vein is evidenced by hemorrhages, with a certain amount of edema and exudation in the region drained by the affected vessel. This thrombosis is usually initiated by the pressure of a sclerosed artery on the vein, probably followed by localized phlebitis. The sclerosis is often not severe, and for this reason the prognosis for the life of the patient need not necessarily be immediately serious. By certain authors, thrombosis of the retinal veins is considered as an indication of the probable future occurrence of cerebral thrombosis, but this event is often considerably delayed. Thus, in a series of sixty-two cases, Moore[7] found that in 40 per cent a gross cerebral vascular lesion developed within eight years of the occurrence of the retinal venous thrombosis. In my opinion, the prognosis is dependent much more on the degree of the associated or causative arteriosclerosis than on the largely incidental development of local thrombosis.

If the sclerosis becomes sufficiently severe to interfere with retinal nutrition through capillary stasis resulting from partial obliteration of one or more of the smaller arterioles, punctate hemorrhages and spots of hyaline or fatty degeneration may appear in the affected area. This type of lesion is the true retinitis or arteriosclerosis and was first clearly distinguished from "albuminuric retinitis" by Moore.[6] Retinitis which develops as a result of arteriosclerosis is due to actual organic changes in the arterial wall and it is therefore always associated with advanced local arteriosclerosis. Advanced sclerosis of the retinal arterioles usually indicates, similarly, severe sclerosis in the arterioles of the brain. Therefore, the prognosis for life is more serious in patients with retinitis of arteriosclerosis than in those with retinal venous thrombosis. Moore found that in 46 per cent of his cases of retinitis of arteriosclerosis a gross cerebral vascular lesion developed within three years from the time when the retinitis was observed.

Both venous thrombosis and retinitis of arteriosclerosis occur usually in older patients, in the main in patients aged more than fifty years, and are due, as previously stated, to local vascular disease. Retinitis does develop, however, in patients of any age who have hypertension which is not dependent on local organic disease of the retinal vessels and which therefore has a prognostic significance different from that of the associated sclerosis. This retinitis has long been considered to be an indication of the toxemia of associated or complicat-

ing nephritis. Keith, Wagener and Kernohan have shown conclusively, however, that such retinitis often develops while renal function is still entirely adequate. It seems definite that the retinitis is dependent on some factor inherent in the hypertensive disease itself, and can therefore be spoken of as retinitis of hypertension.

Retinitis can occur, under circumstances not yet fully understood, in cases of relatively benign and nonprogressive hypertension. In such cases a few scattered hemorrhages and white patches of cotton-wool type may be seen in the retina. If the patients take prompt measures for the proper management of the hypertension, the retinitis clears up quickly, and there is usually no permanent change in the apparently benign character of the disease. This type of retinitis may therefore be spoken of as retinitis of benign hypertension and it should be regarded merely as a sign of potential danger.

If, however, such retinitis frequently recurs, or instead of clearing up becomes more extensive and is characterized by rather numerous hemorrhagic areas, cotton-wool patches, and localized edema of the retina, the hypertension must be regarded as of a more severe and progressive character and the prognosis for the life of the patient must be guarded. For want of a better term, this type of retinitis is designated "retinitis of severe benign hypertension." It is seen frequently in cases of cardiac decompensation and usually indicates, as was shown in the series studied by Yater and Wagener, that the decompensation is essentially the result of hypertensive cardiac disease.

Retinitis of severe benign hypertension sometimes merges into, or is difficult to distinguish absolutely from, the last and prognostically the most serious type of retinitis seen in cases of hypertension, namely, retinitis of malignant hypertension. The classification of hypertension as malignant often depends entirely on the presence of this type of retinitis, for it may appear when the patient is in apparently excellent condition with the exception of the elevation of blood pressure. The picture of retinitis of malignant hypertension is essentially that of the classic albuminuric retinitis, which included both the retinitis of malignant hypertension and that of chronic glomerulonephritis. Retinitis of malignant hypertension is distinguished from retinitis of benign hypertension by the presence of edema of the disk; it is distinguished from retinitis of chronic glomerulonephritis by the presence of the hypertension type of sclerosis of the retinal arterioles. Its prognosis with regard to the life of the patient is invariably bad; seventy-three of our eighty-one patients died within four years and only three lived more than eighteen months after the observation of the retinitis.

From the studies of Keith, Wagener and Kernohan, it seems definite, clinically and histologically, that retinitis of malignant hypertension is associated with diffuse sclerosis of the arterioles and not with nephritis. The question of its pathogenesis is, then, of considerable interest. An outstanding feature of the retinitis, especially in its early stages, is the marked attenuation of the arterioles. This attenuation apparently is due to active constriction and not to organic sclerosis of the wall of the vessel, as it may disappear in the regressive stages of the retinitis. Volhard believes that, both in malignant sclerosis and in glomerulonephritis, the edema of the retina is due to local ischemia and increased permeability of the capillary walls resulting from spastic contraction of the arterioles, and he believes, therefore, that the term, angiospastic retinitis, should replace that of albuminuric retinitis. His conception of the mode of onset of the retinitis is probably correct.

That active constriction of the arterioles precedes the onset of edema and hemorrhage in the retina can be demonstrated most readily in cases of toxemia of pregnancy. Rapid rise of blood pressure in a case of so-called nephritis of pregnancy is usually accompanied by visible general and localized spastic constriction of the retinal arterioles. It is possible, of course, that similar spastic constriction of the arterioles throughout the body, and not true nephritis, is the cause of the elevation of blood pressure. If the toxemia is controlled in its early stages by conservative or radical treatment, the constriction rapidly disappears and the retinal arterioles regain their normal appearance. If the toxemia is not controlled, how-

ever, edema and hemorrhage appear in the retina, usually at the points of maximal constriction of the arterioles. In cases in which constriction of the arterioles persists sufficiently long to cause definite retinitis, sclerosis of the arterioles develops apparently as a result of ischemia of the wall of the vessel through constriction of the vasa vasorum, or, as Volhard believes, from the toxic action of substances produced locally in the poorly nourished tissue. Such patients seldom recover completely from the toxemia and are left with more or less progressive hypertension which may ultimately lead to death from cerebral hemorrhage; in the kidneys, at necropsy, only sclerosis of the vessels is found.

An interesting comparative study of the retinal arterioles and capillaries of the nailfolds was carried out by Haselhorst and Mylius in a case of rapidly developing eclampsia. When the constriction of the retinal arterioles became marked, there was definite stasis of the blood in the capillaries of the nailfolds. Shortly after the appearance of edema and hemorrhage around the most markedly constricted arteriole, a convulsion occurred and labor was induced. The condition of the arterioles and capillaries rapidly returned to normal. It is probable that the convulsions were due to constriction of the cerebral arterioles, with capillar stasis and consequent edema of the brain.

It seems obvious, then, that spastic constriction of the arterioles is a significant factor in the causation, perhaps, of the hypertension itself and certainly of many of its symptoms and complications. The difference in the clinical picture and prognosis of retinitis in benign and in malignant hypertension probably depends on the degree and persistence of the angiospasm.

In connection with the work of Adson and Brown in the surgical treatment of Raynaud's disease, it has been possible to observe definite dilatation of the retinal arterioles following cervicothoracic sympathetic ganglionectomy. This emphasizes the significance of the sympathetic system in the maintenance of the normal caliber of the arterioles and perhaps points to the possibility of the control of progressive hypertensive disease through surgical intervention.

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A PLEA FOR MORE THOROUGH EXAMINATION AND STUDY OF ALL PATIENTS*

By Samuel E. Harmon, M. D., Columbia, S. C.

It isn't that one man is much more intelligent than another, it's because one is more energetic, studious, and painstaking than the other. We can all do good work if we try and find plenty of trouble if we look for it.

The medical profession reap what they sow. If we do honest, conscientious, scientific work we will be greatly rewarded. On the other hand if we do slip shod unscientific work we will receive what we deserve.

We are very often criticised, and justly so, because we do not do our duty towards our patients. When any one presents themselves to us for information or assistance, lets do our whole duty; obtain a careful history, make a general inspection, look them over thoroughly, and if we do we will often find many abnormalities and much pathology that we least suspected. Always inspect and examine all patients undressed, unless all clothing is removed we can only make a partial examination and many things will escape us. Work them out systematically each organ at the time, commencing at the head and continue downward, look over the scalp, observe the general contour of the head and face, make a gross examination of the eyes, and ears, note the condition of the mouth, teeth, tonsils, and gums. There is much pathology in the mouth, that is often overlooked by the average doctor. Many things are learned by an inspection of the eye reflexes. We know that many symptoms are produced from bad teeth, infected gums, and tonsils. Always examine the nose and throat. See if the nasal passages are open, and if there are any gross visable discharges or new growths, note any swelling or abnormalities about the neck such as enlarged glands or new growth. Enlarged lymph glands may signify many things. One may have a marked hyperthyroidism and only show a very small slightly palpable thyroid gland. Not infrequently one will discover a small or large aneurism about the neck or upper thorax by a careful inspection. Always go over the thorax carefully with a stethoscope, take nothing for granted. No one can practice medicine successfully without having a good stethoscope always at hand. When we are called into a home or hospital to see some one with any new or acute trouble let's always examine our patient thoroughly especially the heart and lungs. We will often find something that will give us valuable information, being careful to examine all cavities, mouth and throat in children especially. We will often find them with an infection causing high temperature that we are unable to explain, unless a thorough inspection and examination is made of all organs, especially, eyes, ears, nose, mouth and throat. Cultivate yourselves to the use of the ear speculum and you will often find that a child has an infected middle ear, that will explain all symptoms and unless we are systematic in our work the real trouble will be overlooked. Our results will be unsatisfactory and just criticism will be heaped upon the medical profession.

Pain is natures outstanding symptom. That signifies that there is something wrong. It points out to us where the trouble is for our careful consideration not to be relieved until we understand the cause. Dr. John B. Murphy once said that pain was a red flag hung out by nature that indicated danger, and that it was criminal to relieve it until we understand the cause. Suppose one has a joint or muscular pain in the absence of an injury. Such a pain spells infection as an underlying cause. That calls for a careful investigation to find out where and what the infection is, and to be cleared up when found and the suffering will be relieved. Drugs play a very small part in relieving tissues of an infection. The tissues most often infected are the gums, teeth, tonsils, the cervix in the female, the prostate in the male, and the seminal vesicle in the male are often the seat of infection that cause quite a bit of trouble that is often overlooked. An infection is very often picked up from the intestinal tract through the lymphatic and blood stream. We believe that infected gums, tonsils, and teeth are the source of a large percent of heart and kidney conditions, and are the greatest of all causes of so called rheumatism.

Suppose one has an abdominal pain. What

*Read before the Fifth District Medical Society, Chester, S. C., March 26, 1929.

might be the cause of pain in the abdomen? There are many different conditions that may cause abdominal pain, the most common source of abdominal pain is trouble with the appendix, female organs, liver, stomach, urinary tract, intestines, pancreas, and peritoneum, and of course there are many conditions connected with each one of these organs that may be the seat of pain. Any one of these calls for a thorough investigation, and a careful general physical examination, because not infrequently the real cause of what appears to be an abdominal pain is in reality situated in the thoracic cavity. Such as a pneumonia, pleurisy, or some coronary condition, such as angina or thrombosis of the coronary vessels producing an infarct.

There is no investigation completed until the blood and urine have been looked over by a competent man. Urine both microscopically and chemically. A blood Wassermann will often clear up many vague symptoms that we find, and last but not least a rectal examination. Much information can often be obtained from a careful rectal examination. Not infrequently men make quite a reputation for themselves by doing the very thing that has been overlooked, a careful rectal examination.

Suppose a patient presents themselves with a discharge? Any abnormal discharge signifies trouble. Thousands of human lives are sacrificed every year because these symptoms were treated lightly. The proper investigations were not made and proper treatment not instituted.

The early symptoms, of cancer, of the female organs, intestines and rectum as a rule is indicated by some abnormal discharge either serous, purulent, muco purulent, or bloody. Any one or all of these demand a thoroughly working out at once, also any abnormal discharge from the nipple requires investigation for it will often spell cancer.

The average doctor will say that I can't make all these examinations and tests, of course you can't, neither can I, but we can find a competent man who can and will work with us. Much has been, and is being said about quacks exploiting their wonderful work and results upon the public. They exist largely because we are poor doctors.

If we were better doctors and did more honest efficient work for our patients, quacks could not exist very long. Their success is due to our defects, mistakes, and disception. If we ever hope to clear the country of such people, we must clean up in our own ranks first, they are with us, one of us, we must do better work and give our patients better results. When we do this the public will have the proper confidence in us, and we will be in a position to demand respect and a proper reward for our services.

VEGETABLE FOOD AND THE GOITER PROBLEM

By Roe E. Remington, Ph. D., Charleston, S. C.

Director of Laboratory, South Carolina Food Research Commission, Charleston, S. C.

The term "goiter" has been very loosely used, that is to say, it has been applied to conditions of hypothyroidism and hyperthyroidism as well as to conditions in which the thyroid gland is simply enlarged without other symptoms of disfunction. From a public health point of view, however, we should limit it to those abnormalities of the thyroid gland which are directly traceable to a lack of iodine or which can be permanently cured or prevented by suitable prophylactic treatment.

Thyroid enlargement has been known since the earliest times, so that we read that it was the practice in China several thousand years ago to feed thyroid substance from animals in the treatment of goiter, and the ancient Phoenecians made a practice of feeding burnt sponges to thyroid patients. Our knowledge of the relation of iodine to the function of the thyroid gland dates from the discovery of Baumann in 1895 that the gland contains an organic compound of iodine, and the work of Kendall in 1914, who isolated from the thyroid glands of sheep, a pure crystalline substance containing 65 per cent of iodine, and which he named thyroxin.

Injection or feeding of Kendall's thyroxin to persons suffering from hypothyroidism has resulted in an increase in the basal metabolic rate, and a general improvement in conditions. Hardlington succeeded in making thyroxin synthetically in the laboratory, and showed the basic ingredients necessary for its synthesis to be tyrosine and iodine.

Translated into popular language, our picture of the thyroid gland is that of a chemical factory which requires as raw materials substances derived from the protein of our food, and iodine. Unlike an industrial plant, which shuts down if raw material is lacking, the gland, in case of iodine deficiency starts to enlarge, apparently in the attempt to collect more iodine from the blood which supplies it. This enlargement we call simple goiter. The finished product of this factory is a substance (thyroxin or a more active form of thyroxin) which is delivered to the blood, carried by the blood to the most remote parts of the body and acts (to use a familiar term) as a timer for the fundamental activities of the body. If too little of the timer substance is produced, the body machine runs slow—mental and physical processes are less active, body temperature and pulse rate are apt to be lowered, the subject lays on fat, and in extreme cases the skin becomes thickened dry and rough, the eye loses its luster, a condition of myxedema.

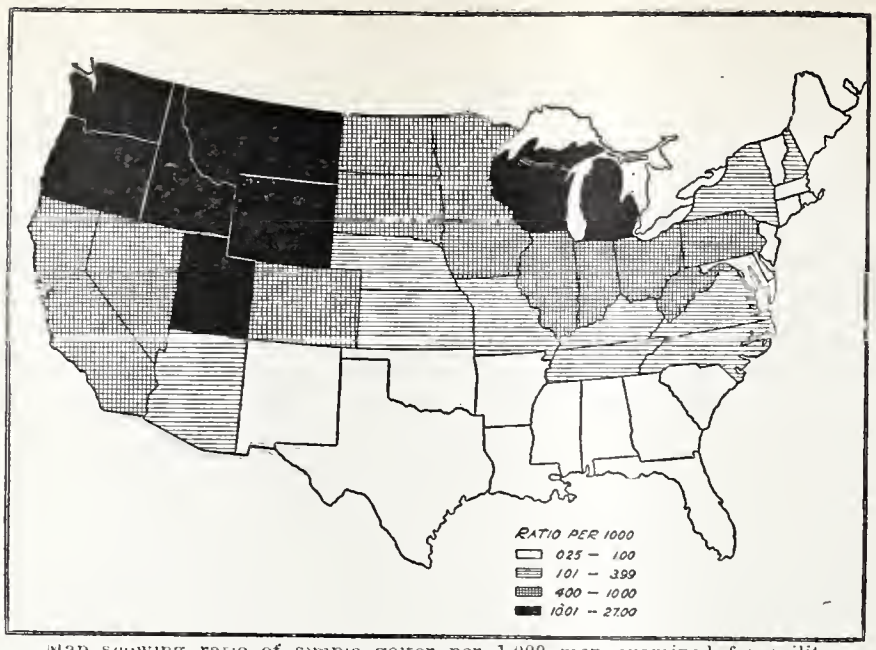
The opposite picture is that of a factory whose output of the timer substance is greater than it should be, so that all these effects are reversed—more rapid respiration and pulse, higher body temperature, a tendency to lose weight, increased mental and physical activity, etc. This is the condition in the so-called toxic types of goiter—which can be relieved only by cutting out part of the gland so as to reduce it to somewhere near its normal size. This extra active gland is supposed by most investigators to follow after the simple goiter—that is, a lack of iodine causes the gland to enlarge, and the enlarged gland later becomes too active. This is not the entire picture by any means—I only wish it were sufficiently well understood so that we could assign a definite cause to every kind of goiter.

Goiter is not confined to the human family. Stockraisers in Montana found that in certain seasons a considerable proportion of their lambs and pigs were born dead, a condition which yielded rapidly to the addition of iodine compounds to the ration of the breeding animals. Dogs in Minneapolis and St. Paul have goiter, and the fish in the hatchery near Superior, Wisc., were found to be afflicted with it.

A lack of iodine extending over several generations gives rise to the birth of cretins—children which are born without functioning thyroid glands, and which refuse to grow and develop normally, so that in some European countries we see numbers of curiously misshapen dwarfs. Other effects are the birth of congenital idiots, feeble-minded children, sterility, etc.

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*Read before the South Carolina Medical Association, Charleston, S. C., May 8, 1929.



Map showing ratio of simple goiter per 1,000 men examined for military service in each State of the United States during the World War. The rates are based on a total of 2,510,701 examinations.
(Olesen, Robt., U. S. Pub. Health Repts., 1927, p. 3180)

The studies of McClendon on iodine in water supplies have shown that in those parts of the United States where the soil is largely of glacial origin, the waters are extremely low in iodine and goiter is correspondingly common. Goiter has been found to exist in every country in which studies have been made, although it is more widespread and severe, and has been studied longer in the interior of Europe, notably Switzerland, than any other place. The relative distribution of goiter in the United States can be seen by reference to a map (Plate 1) prepared by Robert Olesen from the results of the examination of drafted men in the recent war, but since goiter is less prevalent among men that among women, and has been found to be more prominent at the time of adolescence, more accurate pictures have been obtained by the examination of high school girls, the results of such examinations made by public health authorities being shown in Table 1, from which we note that in some parts of Michigan and Minnesota as high as 70 per cent of these girls showed definite thyroid enlargement which can be detected by palpation. It is a rational assumption that when any such proportion of children show detectable enlargement, the entire population must be effected to a greater or less extent. Unfortunately simple thyroid enlargement is not usually considered as a serious matter, and it is only when we reflect upon the experience of Europe in areas where iodine deficiency has existed over a number of generations with resulting increase in the number of cretins, congenital idiots, and cases of myxedema and sterility, that we realize what the future may hold for the people in those parts of our own country where iodine is lacking in the environment.

Attempts to remedy this situation by the periodical addition of sodium iodide to the water supplies have been made in some cities. This, of course, cannot affect that part of the population which does not live in cities, or at least very indirectly. Furthermore Olesen (1927) states:

"The iodization of public water supplies, in its present state of development, cannot be recommended for widespread adoption. However, the lack of convincing evidence of the efficiency of iodized water appears to be the result of poorly controlled experimental applications, rather than any inherent defect of the procedure itself.

While the measure can not be recommended for wider use until stronger evidence concerning its value is forthcoming, nevertheless, iodized water should not be condemned as worthless. Rather there is need for more precise experimental work with careful and re-

peated thyroid examinations, both of children as well as adults."

At the suggestion of the Michigan State Board of Health, salt manufacturers have put on the market a salt containing two hundredths of one per cent of sodium iodide, which is being quite largely sold. Opinions as to the efficiency of this method of supplying iodine are various. Resurveys which have been made following the use of this iodized salt for several years, have not shown the expected decrease in the incidence of goiter. Some medical authorities are firmly of the opinion that the administration of inorganic iodides is a real source of danger to those persons whose thyroids are already abnormal, and others are of the opinion that it is not efficient in the prevention of goiter. The problem is not as simple as we had hoped and expected.

TABLE I

Goiter in High School Girls

(After McClendon, Physiol. Rev. 1927)

	Per Cent goitrous
Michigan:	
Houghton County	71
Wexford County	56
Midland County	33
Malcolm County	26
Grand Rapids—Kent County	40
Minnesota:	
St. Paul	73
Average of 13 towns	71
Montana:	
Fergus County	49
Carbon	39
Cascade	34
Big Horn	25
Hill	13
Ohio, Cincinnati	40
Colorado	40
Utah	54
Kansas, Topeka	50
Connecticutt, Average	29
Manitoba	43—79

Dr. J. W. Turrentine of the United States Department of Agriculture has suggested that iodine in the natural combinations in which it occurs in food should be more efficiently used and less readily eliminated from the body than inorganic iodides, and suggests sea-weed as a desirable source. This idea is borrowed from what we already know about many elements, iron, notably, and calcium, neither of which is of any apparent use to the body when given as the mineral salt. So far as we know, the best sources of iron are liver and spinach, of calcium, milk and vegetables.

Dr. J. F. McClendon of the University of Minnesota examined a large number of samples of surface waters from different parts of the United States, and found that in those places where much goiter existed the water contained little or no iodine. But there is practically no place in the country where the drinking water contains enough iodine to provide for the needs of the body (excepting some mineral waters). So McClendon examined samples of vegetable food from goitrous and non-goitrous regions, and found more iodine in foods grown in Main and Connecticut than in those from Minnesota or Oregon, where goiter is common.

Since goiter is comparatively rare in South Carolina, this state is a good place in which to study the occurrence of iodine in human environment. This task was accordingly taken up in the food research laboratory at the State Medical College. There have been examined up to the present time, something over two hundred samples of roots, leafy vegetables, and grains from the state. This is probably a larger number of samples than have been examined by all other workers in the United States. A comparison of some of these results with previously published values from other states is given in Table II. It will be seen that the South Carolina values are enormously greater than any of those reported by McClendon.

Nevertheless, South Carolina does have some goiter, and recent surveys have shown that there is more among the colored children than among the whites, at least in Columbia. How shall we explain this if our vegetables contain sufficient iodine to prevent goiter? There is no particular virtue in living in South Carolina unless one eats the foods which are grown there. City dwellers whose food comes mostly

out of tin cans (the cans being filled, perhaps, in Ohio, or Wisconsin) and those, city or country, who through ignorance or poverty have eliminated vegetables from the diet, might almost as well be living in the goiter belt.

The valuable factors in the prevention of goiter have been claimed to be iodine-bearing waters and sea fish. The sea because of its vast size, contains most of the world's supply of iodine, but at that the water of the Atlantic Ocean contains only 23 parts per billion. Sea plants are able to concentrate iodine, and fish feed on these plants, so are relatively rich in iodine. Nevertheless, fish is not a pre-dominant part of the diet in South Carolina, even on the coast. Certainly fish is not eaten with the frequency and regularity that potatoes and "greens" are. Hence, if goiter is rare in this region, it must be the vegetables rather than fish which supply the need.

TABLE II

In the following table, the iodine content of some South Carolina vegetables is compared with results published by McClendon for vegetables produced in California and Oregon. Results are in parts per billion of iodine in the dried vegetable.

	S. Car. Analyses by Remington	Calif. Oregon Analyses by McClendon	
String Beans	429	--	29
Beets	233	8.0	--
Carrots	135	8.5	2.3
Lettuce	754	--	--
Peas	197(ripe)	8.4(green)	--
Potatoes	517	--	--
Spinach	424	26.0	19.5
Soup Vegetables	--	--	13.5
Squash (summer)	1018	--	--
Sweet Potatoes	135	--	--
Tomatoes	273	17.5	--
Asparagus	350	12.0	--
Cabbage	504	--	--
Cucumbers	523	--	--
Egg Plant	338	--	--

Salt spray is thrown into the air at the sea shore, dries, and is blown inland as salt-laden dust which contains the iodine of the sea. This dust, washed down by rain, has been supposed to account for all the iodine in the surface waters of inland regions. But this dust also contains all the other salts of the sea in their original proportions, and if the waters of a stream contain from 1/4 to 1/5 as much iodine as does the sea, they should also contain 1/4 or 1/5 as much salt. This has not been found to be the case, so that the iodine in the soils and waters of South Carolina cannot be accounted for on the salt spray theory.

Many granite and other rocks contain iodine, and it is our theory that the iodine in our South Carolina soils is mainly derived from the weathering of the granite rocks of the Appalachian Mountains, but has probably been somewhat augmented by the use of commercial fertilizers over a long period of years. According to Von Fellenberg, Chilean nitrate of soda may contain as high as 0.02% of iodine, but most other fertilizer materials do not contain more than is found in some soils.

Plants are able to take up iodine from the soil solution and accumulate it in their tissues, it having been demonstrated by Stoklasa that the addition of a small amount of sodium iodide increases the iodine content of sugar beets, both leaves and roots. Stoklasa also found that a small amount of iodide (two pounds per acre) increased the yield of the crop, that is to say, the plant makes a better growth if it can obtain a little iodine. No one has ever suggested that plants can have goiter, but it looks as though the plant uses iodine in its metabolism and growth, just as it uses nitrogen, phosphate, or potash. If this is true, it is doubtless also true that the plant builds the iodine into some organic compound. It would be extremely difficult to separate such a compound from plant tissue, which contains an ounce or less of iodine in a car load, and no one has as yet attempted to do it.

In our laboratory we have found that the tops of beets, carrots, and turnips contain more iodine than the roots, and since the leaves are the more active part of the plant, the part where the chemical changes of growth are taking place, I believe this fact to be evidence that the plant is making use of the iodine—is actually building it into the organic structure.

Another interesting field for study lies in comparing the ability of different food crops to take up iodine, and their need for it. The broad leaved plants, spinach, lettuce, turnip tops, etc., are richer in iodine than root crops, like potatoes, beets, etc. Among the roots, Irish potatoes have been found to contain a great deal more than sweet potatoes, or any other root. Cereal grains are very poor in iodine, regardless of where grown. We advocate that the diet of young children, and pregnant and nursing mothers, should contain each day at least one leafy vegetable, (spinach, lettuce, turnip tops, broccoli, etc.), one root vegetable (turnips, beets, carrots, etc.), and a potato, all grown in a region where the supply of mineral elements in the soil is known to be adequate, thus insuring a supply of the necessary calcium, iron, iodine, manganese, etc., during the important formative period of the physical organism.

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and
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For catalog apply to J. M. H. Rowland, M. D., Dean, N. E. Corner Lombard and Greene Sts., Baltimore, Md.

SOCIETY REPORTS

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL, TUESDAY EVENING, MAY 14, 1929, AT 8:30 O'CLOCK.

The meeting was called to order by the President, Dr. Henry P. Jackson.

Present: Doctors: Allen, Beach, Bowers, Burbage, Burn, Byrnes, Cain, Cannon, Cathcart, Finger, Heidt, Jackson, W. H. Johnson, Lynch, McCrady, Mitchell, E. F. Parker, Pearlstine, Plowden, W. H. Price, Prioleau, Ravenel, Rhame, W. M. Rhett, Rutledge, W. A. Smith, Speissegger, Townsend, Waring, Wild, I. R. Wilson, R. Wilson. (32).

The minutues of the meeting of April 23rd were read and approved.

Under Reports of Officers and Committees, Dr. R. S. Cathcart, Chairman of the Committee on the Ross Estate, submitted the following report:

The Committee on Ross Estate begs to report that they received on May 11, 1929, from the Executors of the Ross Estate two checks, one for Forty Thousand Dollars ($40,000.00) on account of the principal of the residuary estate devised to the Medical Society of South Carolina as Trustees by the said Mary Jane Ross; the second for Ten Thousand Dollars ($10,000.00) on account of the income from the residuary estate devised to the Medical Society of South Carolina as Trustees by the said Mary Jane Ross, Harry P. Jackson, M. D., President and W. Atmar Smith, M. D., Secretary, executing the receipt for the Society.

On May 11, 1929, this Committee instructed its Treasurer, A. J. Buist, M. D., to deliver to the Board of Finance of the Medical Society of South Carolina a check for Forty Thousand Dollars ($40,000.00).

As the result of a conference with our attorneys, Messrs. Hagood, Rivers and Young, and upon their advice, we have adopted the following and similar action has been taken by the Trustees of the Presbyterian Hospital:

WHEREAS, the Estate of MARY JANE ROSS holds a ground rent of Fifty-nine and 50/100 dollars ($59.50) annually issuing out of premises 2510-12 Richmond Street, City of Philadelphia; and

WHERAS, for the purpose of making such distribution in kind, it is agreed that for the purpose of fixing the principal valuation of said ground rent to ascertain the commission payable to the Trustees, such valuation be fixed at One Thousand Nine Hundred Eighty-three and 33/100 dollars ($1,983.33).

NOW, THEREFORE, BE IT RESOLVED, that the Medical Society of South Carolina accepts distribution in kind of the said ground rent at said valuation and that the said Trustees under the Will of Mary Jane Ross be requested in distribution of said ground rent to convey the same to the Presbyterian Hospital in Philadelphia, and the Medical Society of South Carolina, or to their respective nominees, as tenants in common.

WHEREAS, by the said Will of the said Mary Jane Ross, it is further provided that her said executors and trustees shall receive a commission for their services at the rate of five per cent (5%) on principal, including ground rent,

THEREFORE, BE IT RESOLVED, That the Medical Society of South Carolina consent and agree that the commissions to the said Trustees on the ground rent to be distributed in kind shall be at the rate of five per cent (5%) upon the valuation herein stated, and that if the personal estate in the hands of the Trustees is insufficient to pay such commissions, together with other proper charges, the Medical Society of South Carolina will pay to the said Trustees one-half of any such deficiency.

RESOLVED, that the proper officers of the Society be authorized and directed to execute such agreements or other instruments, and perform such acts as may be necessary or expedient for the purpose of securing the distribution of said estate in accordance with the directions of this resolution.

Committee on Ross Estate,
R. S. Cathcart, M. D.,
Chairman.

It was moved, seconded and carried that the report be accepted and the action of the committee confirmed.

Dr. R. S. Cathcart, Chairman of the Board of Finance, reported as follows:

The Board of Finance begs to report that they received from the Committee on Ross Estate on May 14, 1929, a check for Forty Thousand Dollars ($40,000.00), being partial payment on the principal of the residuary estate under the terms of the Will of Mary Jane Ross.

The Board of Finance will invest this amount to the credit of the 'Ross Henry Memorial Fund" according to the terms of the Will of Miss Mary Jane Ross.

Board of Finance,
R. S. Cathcart, M. D.,
Chairman.

It was moved, seconded, and carried that this report be received as information.

Dr. W. H. Prioleau brought to the attention of the Society the matter of fees charged by the State Board of Medical Examiners to candidates for licenses who have passed the National Board of Medical Examiners. This created a considerable discussion.

Dr. E. F. Parker moved that it was the sense of this Society that those certificated for licenses by the National Board of Examiners should not be charged a fee for registration in South Carolina; and that the matter of the presence of the candidate before the Board be made optional. This was seconded and carried.

It was moved, seconded and carried that the Chair appoint a committee, composed of Doctors Wilson, J. H. Cannon and R. S. Cathcart, to invite Dr. J. T. Taylor, Chairman of the Board of Medical Examiners, to appear before the Medical Society and explain the attitude of the Board on this question.

It was also moved, seconded, and carried that the Secretary be instructed to write to the various county medical societies setting forth the view of this Society in regard to the matter of charging applicants for licenses who have successfully passed the National Board of Medical Examiners.

Under Miscellaneous Business, Dr. K. M. Lynch directed the attention of the Society to the proposed change in the school day of the Charleston public schools from a single session into a double session. He read a brief essay on the dangers of over-schooling, and proposed the following resolutions, which were seconded and adopted:

WHEREAS: The Medical Society of South Carolina has been informed that it is contemplated that a change is to be made from the single session school day to the double session in the public schools of Charleston, and

WHEREAS: It is understood that this proposed change contemplates a mid-day dinner hour and a return to classes for an additional period of time, and

WHEREAS: This would apparently expose school children to double the hazards of street traffic as at the present, and

WHEREAS: The mid-day dinner of the school children would be taken under hurried conditions and in a probably unhealthful manner, and

WHEREAS: It is doubtful that children should return to school work immediately following a hurried mid-day dinner, and

WHEREAS: Lengthening of the school day would hold the school children longer in the crowded and inadequate grounds and buildings of our public schools, and

WHEREAS: It would prevent growing children from obtaining an optimum of physical relaxation and exercise under better environment, and

WHEREAS: It appears that any advantage conceived in the change is outweighed by these factors, which concern the health of growing children, be it, therefore,

RESOLVED: That it is the sense of this Society that the health of the school children of Charleston will not be as well conserved as under the single limited session system as now in force and be it further

RESOLVED: That a copy of these resolutions be forwarded to the Superintendent and Commissioners of Public Schools, and to the Chamber of Commerce and the newspapers of the city.

The Special Order of Business, the discussion of the Report of the Committee for the Investigation of Charity Services, was next taken up. Dr. J. W. Burn, Chairman of this committee, read extracts from his report bearing on the local situation, each member having previously had mailed to him a typewritten copy of this report. The following members of the Society discussed the report from various angles: Doctors: E. F. Parker, Robert Wilson, W. M. Rhett, M. W. Beach, I. R. Wilson, J. S. Rhame, J. H. Cannon, W. A. Smith, and W. H. Johnson. It was moved, seconded and carried that the committee be continued, and urged to formulate a more definite program for the solution of the problem in Charleston.

Owing to the lateness of the hour, it was moved, seconded and carried that Dr. Robert Wilson, the essayist of the evening, be requested to postpone his paper on Coronary Occlusion for the next regular meeting of the Society.

The meeting then adjourned.

W. Atmar Smith, Secretary.

REGULAR MONTHLY MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY, HELD AT THE IMPERIAL HOTEL, APRIL 1, 1929.

The meeting was called to order by the President, Dr. J. G. Murray at 8:20 P. M. with about 35 members present.

Reports of clinical cases were then called for. Dr. Tyler reported a case of spinal injury from a gunshot wound and exhibited the patient who had recovered. There was no sensory disturbance in this patient except the calf of the right leg. The patient now walks with a shuffling gait. The injury was complicated by syphilis. Dr. Tyler stated that the dura should have been opened at operation. Discussed by Dr. Brown.

Dr. J. W. White reported a case of tibial lengthening.

Drs. J. M. Fewell and Kluttz reported a case of deep-seated pneumonia. The patient looked pneumonic, had a leukocutosis but nothing could

be found on physical examination; temperature came down by crisis. The pneumonic areas were revealed by x-ray.

The President then called upon Dr. I. H. Grimball, who gave a very informing discussion on Sinus Infections in Children. This infection is very common since the last epidemic of influenza. Dr. Grimball stated that the average text book description of this disease is very meagre. Sinus infection is very often a focus leading to diarrhea, rheumatism, pyelitis and so forth. Infection of the rudimentary ethmoid cells and antra have been reported in early infancy. On seeing a case the child appears acutely ill with high fever and reddened throat, puffy eyes, gastric disturbances, a nonproductive cough and intestinal symptoms. Lymphadenitis is very apt to occur in streptococ-as a tampon—causing the discharge of pus, etc., as a tampon—causing the discharge of put, etc., through the nose. Pus dropping down the pharnyx causes a very annoying cough and the bacteria-laden discharge gives rise to gastro-intestinal upset.

Treatment is conservative and consists of forcing fluid, the administration of purgatives, steam inhalation, chloreton inhalant, etc. Oily fluids are contraindicated. Starchy and sweet foods should be eliminated from the diet; food containing a plenty of vitamine A should be given.

A good X-Ray plate is necessary for diagnosis. Discussed by Drs. Sanders, W. T. Brockman and Mauldin; closed by Dr. Grimball.

Dr. W. S. Fewell was then called upon. He prsented a very interesting talk on Vaccine Therapy, stating that it was the custom in the early days to give immunity to people by causing them to have actually mild cases of disease. Metchnikoff was the pioneer in vaccine therapy and advocated phagocytosis as the whole factor in immunity; this has since been disproven. Dr. Fewell then stated that Ehrlich's side-chain theory is the fundamental principle of immunity, at which time he reviewed the theory. The speaker was unable to commit himself on the value of certain kinds of vaccine therapy. Hektoen and Irons sent out questionnaires regarding stock vaccines and attogenous vaccines and received 1216 answers. Ninety per cent of these physicians had not used any vaccines, and the vast majority had not gotten any positive results; 6 deaths were reported from their use, and 17 cases of asthma were attributed to their use. There were some cases in which patients were made worse. Kolmer has been more successful; his method is to make autogenous vaccines, follows up with skin tests and uses the vaccine to which the patient is most susceptible. Discussed by Drs. Kluttz, Barksdale, J. M. Fewell; closed by Dr. W. S. Fewell.

The president then appointed a Committee on Resolution for the deaths of Dr. W. B. Sparkman and B. F. Goodlett consisting of Drs. G. T. Tyler, L. O. Mauldin and E. W. Carpenter.

There being no further business, the meeting adjourned.

I. S. Barksdale, M. D., Secretary.

THE REGULAR MONTHLY MEETING OF THE SPARTANBURG COUNTY MEDICAL SOCIETY, HELD AT THE GENERAL HOSPITAL, FRIDAY, MAY 31, 1929.

The regular monthly meeting of the Spartanburg County Medical Society was held Friday, May 31, 1929, at 8 P. M., at the General Hospital. About 30 members were present. The minutes of the previous meeting were read and approved.

Dr. J. T. Carter read a paper on, "Iritis". Dr. Carter stated that the ciliary body as well as the iris was nearly always involved and that focal infection, syphilis, and traumatism were the causative factors. The symptoms are pain in the eye, tenderness, photophobia, and lacrymation The pupil is contracted, reacts slowly to light, and will be irregular if there are adhesions. The anterior chamber is turbid. Iritis should be differentiated from glaucoma and conjunctivitis. In glaucoma the tension is increased, the anterior chamber is not deep, and in conjunctivitis there is discharge. The instillation of a drop of adrenalin will cause the blood vessels to shrink, and homatrapine will cause the pupil to contract and if iritis has been present long the pupil will be irregular. Care should be used to differentiate iritis from glaucoma, because of the danger of atropine increasing the tension in glaucoma. Early treatment of iritis before adhesions have formed is very important. Instillation of atropine, dionin, cocaine, or holocaine and potassium iodide and mercury internally are very efficacious. Of course atropine is the main drug. The Wasserman should be taken and all foci of infection eradicated.

Dr. Carter's paper was discussed by Drs. Crook and Gray. Dr. Crook stated that he was not in favor of the use of cocaine because it dried the cornea. He said that he relied on adrenalin and atropine to dilate the pupil and break up adhesions and rarely was forced to do an iridectomy.

Dr. Gray stated that adrenalin injected under the conjunctiva was sometimes more successful than when instilled in the eye. In closing the discussion Dr. Carter thanked Drs. Crook and Gray for their discussion.

Dr. Roger Doughty, of Columbia, S. C., gave a very able discussion of hernias in childhood and reported several unusual conditions in children. Dr. Doughty stated that children with hernias were not allowed normal mental and physical growth and that often an hour's coughing would undo the adhesions that had taken months to

form. Eczema sometimes developed as result of wearing a truss. The operation for inguinal hernia in children is easy when small instruments are used. The sac is ligated high up, the wound closed and covered with a collodion dressing and a binder is applied. When a truss is required to keep the hernia in or if the hernia is incarcerated operation is indicated. The mortality from the operation is very small.

Dr. Doughty also reported a case of serious cystadenoma of the ovary with twisted pedicle, a case of hemophilia with severe hemorrhage following injury to the tongue, and a case of arrested development of the colon.

Dr. M. H. Wyman gave a very interesting discussion concerning mistakes that he and others had made in making a diagnosis of urological conditions and showed a number of lantern slides.

Drs. Hames, of Jonesville, Watson Tolbert, of Columbia, and Wyman, of Augusta, were also present as guests of the Society.

There being no further business the Society adjourned.

S. O. Black, President.
W. M. Sheridan, Sec.-Treas.

ORANGEBURG COUNTY MEDICAL SOCIETY

WHEREAS: God in His infinite wisdom has seen fit to take from our midst our brother and co-worker, Dr. Jefferson F. Wannamaker on March 27, 1929, and whereas for many years he was a member of the Orangeburg County Medical Society, during which time he rendered, always with cheerfulness and efficiency such services as came in his line of duty.

THEREFORE, BE IT RESOLVED:

1. That we bow with humility to the will of our Father.

2. That we hereby express our own sorrow because of the death of our beloved friend and our sympathy for the members of his family.

3. That a copy of these resolutions be inscribed in our minutes; and published in The South Carolina Medical Journal, and a copy be sent to the family.

Vance W. Brabham,
Henry R. Moore,
C. I. Green,
Committee.

REGULAR MONTHLY MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY, HELD AT THE GRILL, WOODSIDE BLDG., MONDAY, MAY 6, 1929.

This meeting was in the form of a Banquet held in honor of Drs. Paul H. Ringer, and William P. Herbert, of Asheville, N. C. After the invocation given by Dr. E. W. Carpenter, an excellent dinner was served by the management of the Grill. The attendance was good, approximately 70 members and guests being present.

Following the Banquet, President Murray then called upon the first speaker of the evening, Dr. Paul H. Ringer, who rendered an excellent discourse on the Medical Aspect of Pulmonary Tuberculosis. Dr. Ringer stated that collapse therapy was a relatively new procedure, in order to obtain the necessary rest for the healing of the lung. Phthisiologists and surgeons have joined hands in this work, and the procedure has been termed physiological amputation of the lung. The indications for lung collapse were mentioned as follows:—

1. Chronic Fibroid Unilateral Tuberculosis.
2. Tuberculosis bronchopneumonia.
3. Profuse haemoptysis — pneumothorax is here the method of choice, and is very simple.
4. One type of pulmonary tuberculosis abscess if it exists in a lower lobe that had a tendency to fill and empty, fill and empty.
5. Unilateral cavitation.

The contraindications mentioned were:—

1. Tuberculosis laryngitis, nephritis, colitis, or diabetes. If the tuberculosis exists also in the contralateral lung, it is necessary for the process to clear up. The progress should be followed close by X-ray photographs.

Methods of Producing Lung Collapse:

1. External Pneumolysis. 2. Internal Pneumolysis. 3. Revulsion of the Phrenic Nerve. 4. Thoracotomy. Dr. Ringer stated that external pneumolysis had been abandoned for the most part, that internal pneumolysis which is the actual cutting of lung adhesions by means of a special instrument is not done here but is practiced by Watson in Portland, Oregon. Revulsion of the phrenic nerve and thoracotomy are the methods of choice.

President Murray then called upon Dr. William P. Herbert who gave a very exhaustive discussion of the Surgical Aspect of Lung Tuberculosis. This speaker showed a number of lantern slides and X-ray plates describing his methods of dealing with these diseased lungs from a surgical standpoint. Dr. Herbert stated that phrenic nerve revulsion may be helpful with a limited involvement of the upper lobes of the lung, but that where the tuberculosis process is generalized thoracotomy was the proper procedure. Thoractomy if properly done leaves but little disfigurement of the patient, and Dr. Herbert stated that it is often difficult to tell in a dressed patient viewing from the back which side had been collapsed by this method.

The members of the Greenville County Medical Society thoroughly enjoyed the talks and lantern slides and plate exhibitions of their two guests of honor, and a rising vote of thanks was given at the close of the scientific session.

There being no further business, the meeting adjourned.

Irving S. Barksdale, M. D., Secretary

MINUTES

REPORT OF SECRETARY-TREASURER TO HOUSE OF DELEGATES—MAY 7, 1929

By E. A. Hines, M. D., Seneca, S. C.

At the close of the fiscal year December 31, 1928, there were 793 members in good standing reported from 43 counties, a decrease of 11 members over the previous year due to the falling out of two or three smaller societies. These have all been reinstated and a marked increase in membership shown in some of our larger societies at this time. For instance, the Columbia Medical Society has 102 paid up members and only had 84 in 1928. There appears to be an increased interest in organized medicine throughout the State.

During the year by virtue of the prosperous financial condition of the Journal the quarters of the Association and Journal were enlarged so that the County Medical Society and the County Health Department and other organizations may hold conferences in an attractive environment. In addition, efficiency has been enhanced by the installation of a mimeograph and addressograph. These machines will enable the Association to keep in close touch with the membership in many ways. For the first time the plan was tried out of assisting the Councilor of a District to put on a District Meeting by direct cooperation from the home office, as was done in the Fifth District. The success was marked and this may be repeated even in County Societies where good reason exists for help.

During the year there has been a decided improvement in the scope and value of reports for publication in the Journal of the meetings of many county and district societies. I wish to especially commend Dr. W. Atmar Smith, Secretary of the Charleston Society, Dr. Irving Barksdale, Secretary of the Greenville Society, Dr. E. E. Epting, Secretary of the Anderson Society, and Dr. W. P. Timmerman, one of our hard working Ex-Presidents, Secretary of the Ridge Society. Spartanburg, York and several others have given promise of greater things. The delegates may well encourage this work as they return to their home counties. It is an invaluable stimulus to know what our neighbors are doing scientifically.

An important problem has arisen on the national horizon which affects us as well in South Carolina, that is, the economic status of the medical profession, the cost of medical care, the cost of medical education and the financial rewards of medical practice. A questionnaire is being sent by the A. M. A. to 25,000 representative physicians investigating these matters and should be responded to promptly. Dr. Robert Wilson of Charleston has been made a member of the national committee on the cost of medical care. We have always had the authority to provide for a committee on medical economics but little has been done about it. The situation is acute now and the time opportune to provide for such a committee.

As your representative, I again served on the State Committee of the American Chemical Society, Dr. R. N. Brackett, Professor of Chemistry, at Clemson College, Chairman, for the purpose of awarding prizes to high school students in the domain of chemical contributions to the advance of civilization notably medical progress. This is a growing and important work.

A general survey of organized medicine in South Carolina leads to an optimistic outlook. President Hughes, the Councilors and other officers of constituent societies, as well as the rank and file of membership have been unusually loyal to all the calls made upon them from my office and for this attitude I am profoundly grateful.

Seneca, S. C., April 10, 1929.

Dr. E. A. Hines, Sec.-Editor,
South Carolina Medical Association,
Seneca, S. C.
Dear Sir:—

At your request, I have audited the books of the South Carolina Medical Association and the Journal of the South Carolina Medical Associaton.

I found the books in perfect balance due to the systematic and accurate records kept of all receipts and disbursements. I attach letter of The Seneca Bank certifying as to the cash balances reported as of Dec. 31, 1928.

Yours truly,
(Signed) Frances R. Richardson, Auditor.

The Seneca Bank

Seneca, S. C. April 11, 1929

Dr. E. A. Hines, Secretary-Treasurer,
South Carolina Medical Assn.
Seneca, S. C.
Dear Sir:-

This is to certify that at the close of business on Dec. 31st 1928 there was on deposit in The Seneca Bank of Seneca, S. C. to your credit as Treasurer of the Medical Association of South Carolina $493.73, as Editor Journal South Carolina Medical Association $1226.62. You also hold our Certificates of Deposit No. 3928 dated May 14, 1928 and due one year after date for

$1,000.00 drawing interest at the rate of five per cent annum from date.

Yours very truly,
(Signed) H. H. Macaulay,
Cashier

Note: Reconciliation of Journal Balance.

Balance reported	$1,202.87
Outstanding checks	23.75
Balance shown by Bank	$1,226.62

F. R. R.

REPORT OF SOUTH CAROLINA MEDICAL ASSOCIATION

Receipts

Balance in Bank Jan. 1, 1928	$ 433.20
Membership Dues	2,172.00
	$2,605.20

Disbursements

Printing	$1,172.37
Office Expense	20.40
Stamps	50.00
Annual Audit	50.00
Traveling Expenses Secretary	204.20
Expenses Official Stenographer of Convention	159.06
Expenses two delegates to American Association	300.00
Office Expense of President	32.33
Expenses of Publicity and Legislative Committees	123.11
Balance in Bank Dec. 31, 1928	493.73
	$2,605.20

Statement of Assets

Cash in Bank	$ 493.73
Office Furniture & Fixtures	557.14
	$1,050.87

No Liabilities.

TOTAL ASSETS OF S. C. MEDICAL ASSOCIATION AND JOURNAL

Medical Association	$1,050.87
Journal	2,202.87
	3,253.74

STATEMENT OF JOURNAL SOUTH CAROLINA MEDICAL ASSOCIATION

Receipts

Balance in Seneca Bank Jan. 1, 1928	$1,360.78
Subscriptions	1,599.14
Advertising	2,630.53
Interest on Time Deposit	50.00
	$5,640.45

Disbursements

Salaries	$2,820.20
Printing	1,094.90
Office Expense	178.60
Traveling Expense Sec.-Editor	164.48
Office Equipment	40.50
Sundries	138.90
Balance in Bank Dec. 31, 1928	1,202.87
	$5,640.45

Statement of Assets

Cash in Seneca Bank	$1,202.87
Time Certificate of Deposit	1,000.00
	$2,202.87

No Liabilities

NUMBER OF MEMBERS BY COUNTIES

	Paid	Hon.
Allendale	7	--
Aiken	6	--
Anderson	43	6
Abbeville	9	2
Bamberg	8	--
Barnwell	11	1
Berkeley	4	--
Beaufort	7	--
Chesterfield	13	--
Clarendon	3	--
Colleton	6	--
Columbia	84	12
Cherokee	11	3
Chester	11	4
Charleston	84	4
Dorchester	6	--
Darlington	13	--
Edgefield	2	--
Florence	24	1
Fairfield	5	--
Greenwood	20	--
Georgetown	6	--
Greenville	78	5
Horry	8	--
Hampton	8	--
Kershaw	12	--
Laurens	16	1
Lee	3	--
Lexington	6	1
Lancaster	9	--
McCormick	1	--
Marlboro	10	2
Marion	2	--
Newberry	22	2
Orangeburg	20	1
Oconee	10	2
Pickens	16	2
Spartanburg	61	2
Sumter	15	6
Saluda	4	--
Union	12	1

Williamsburg	8	--
York	26	5
	730	
Honorary Fellows	63	
	793	

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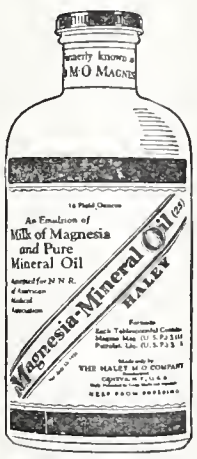
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The Journal

OF THE

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Annual Subscription, $3.00 EDGAR A. HINES, M. D., F. A. C. P., Editor-in-Chief, Seneca, S. C.

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EDITORIAL

SOME SUGGESTIONS FOR ASSOCIATION ACTIVITIES

Cancer

One of the important numbers on the program at the recent Charleston meeting was that of malignant diseases. An organization has been started under the leadership of Dr. R. S. Cathcart of Charleston, Chairman of the State Committee, American Society for the Control of Cancer, Dr. Kenneth M. Lynch of the Medical College, Dr. James A. Hayne, State Health Officer, in cooperation with an organization in every county in the State. The Journal wishes to urge immediate action on this problem. A survey is contemplated to establish the location of cancer cases and the number to be found in the State. To accomplish this it will be necessary for every private practitioner, for all health departments, and all institutions for the care of the sick to cooperate. It appears to be a fact that cancer is on the increase. Its cause has not yet been determined but a knowledge of the disease in its incipiency gives the physician a tremendous advantage in its control. We bespeak a loyal support of the leaders named above by every member of the Association.

Pellagra

A warning is being issued by the State Health Department calling attention to the marked increase in pellagra in South Carolina. This disease is causing a large number of deaths and to encompass its control the entire profession must be aroused to the situation. There may be yet a difference of opinion as to the cause of pellagra but practically it is a nutritional problem both in its prevention and cure. That the disease is an economic problem in part may be conceded, nevertheless, medical men must be the leaders in handling the situation as it now confronts us. County Health Depart-

ments are active in promulgating information about the disease. The State Health Department has provided a means whereby Brewer's Yeast may be purchased through the Department at a low cost by physicians who care to prescribe it. It must be remembered however that nearly half the State remains without County Health Departments so that in the last analysis it behooves the profession generally to take cognizance of the urgency and devise ways and means of meeting it.

Community Hospitals

The Carolinas have an extraordinary opportunity to develope small town and rural hospitals with the aid of the Duke Endowment. President Hughes in his address at the Charleston meeting called attention to the lack of hospital beds in South Carolina for adequate care of our people. The State Medical Association is in position to aid to a great extent the members of the Association in isolated communities in this matter. A consistent policy of promoting such hospitals by proper publicity would add to the cause an impetus much needed in many places. Marlboro County has recently demonstrated that a magnificent hospital may be built on the above plan and as the first institution of this kind to be aided by the Duke Fund stands out as a pioneer worthy of immediate emulation. President C. R. May has been active in the whole proposition and we hope to publish at an early date full details of the opening of the institution on July 2.

Group Insurance

The State Medical Association as yet has not turned its attention toward one of the important phases of protection of its members in the form of health and liability insurance. Group insurance offers protection at a much lower cost than is possible to the individual as was proven during the World War and by many organizations since that time. This type of insurance may be applied to malpractice as well as life and health. Commercial organizations have now perfected such insurance to the point where it is safe and very reasonable as to cost. The State Medical Association may well look into the feasibility and desirability of this suggestion.

Bureau of Publicity for State Board of Health

One of the important reports to the House of Delegates at the Charleston was that of the Committee on Health and Public Instruction, Dr. G. T. Tyler of Greenville, Chairman. This Committee urged an appropriation of twenty-five thousand dollars by the Legislature to provide for a Bureau of Publicity under the direction of the State Board of Health. The report was referred to a Reference Committee and the final action of the House was to the effect that County Medical Societies meet with their delegations during the coming year and acquaint them with the need for such a Bureau following the information by proper personal appeals on the part of the membership throughout the State. Such a Bureau would enable the State Board of Health to reach a much larger number of people than is now the case. Many other States have succeeded with such a plan.

ORIGINAL ARTICLES

A PLAN TO KEEP WELL

By F. M. Routh, M.D., Columbia, S. C., Member Executive Committee, State Board of Health

Following are some simple suggestions that if followed will certainly insure a more healthful public.

1. *PRENATAL*

Ist. Mothers diet the most essential thing. Prevents decayed teeth and supplies calcium. This is essential because babies teeth begin to develop at six weeks.

Foods: Milk, eggs, particularly yolk. Fresh vegetables, whole grain cereals, and bread, orange and lemon juice. A vegetable or fruit and nut salad daily. Fruits supplying organic calcium. Eat only when hungry. Eat slowly. Chew food a long, long time. Drink plenty of water.

2nd. Teeth: Scrupulous cleanliness. Examination by dentist more essential than at any other life period.

3rd. Elimination: Watch *Kidneys*. Have frequent examinations, especially for albumin.

Danger signals: Headaches, dizziness, weakness, feet swelling. Time to see the Doctor. Go to bed. Milk diet until symptoms clear up. This followed carefully will save many mothers and babies lives and prevent much invalidism among mothers, and underdevelopment among infants. Also, prevent a great many obstetrical accidents.

Skin: Cleanliness. There is considerable elimination from the skin. Daily baths with good rubs with coarse towels will keep pores open and increase elimination of poisons. Sunlight and fresh air are essential.

Bowels: Laxatives are pernicious, harmful and unnecessary. Constipation is a habit and a bad one. Take one laxative and you'll need another to correct condition caused by the first. They withdraw body fluids that are essential and are more easily left alone than replaced. They also irritate causing rapid movement of the intestines and *very frequently* encourage appendix abscesses and rupture, a definitely preventable accident. Cultivate and practice abdominal exercises daily. This with a properly balanced diet *will cure* any case of constipation not associated with organic disease. Failure to observe the above fundamental and common sense laws of diet and elimination is the *greatest* cause of ill health and suspected ill health. These errors also lay the foundation for focal infections and organic diseases of heart, kidney and blood vessels.

2. *INFANCY*

Diet: A mother who has obeyed the fundamental laws of health and hygiene can and will produce the best infants food.

Rickets, undernourishment, Eczema, bowel disturbances are practically unknown in breast fed infants.

Sunlight judiciously applied will prevent rickets and skin diseases. Cow's milk, Cod Liver oil and orange and tomato juice with combination strained vegetable soups and whole grain cereals and egg yolk, of eggs boiled for fifteen minutes will supply essential foods for weaned infants. These foods contain all necessary food elements, vitamines and mineral salts to encourage normal development and prevent constipation and other evils. Habit time for bowel elimination should be begun at an early age.

INFECTIONS: *Don't kiss infants*:

Infections are rare in infants under six months of age and after that are caused largely by thoughtless kissing on the mouths of babies. These infants have not developed immunity that older children and adults have and are very susceptible to practically all infections. Eye, ear, nose and throat troubles with their attendant serious complications appear usually as exposure is allowed. The ground work for future ill health is often laid in infancy. Toxin-anti-toxin should be given during this period for prevention of diphtheria. The value

of this in the prevention of diphtheria is characteristically shown in New York City's experience. In 1920 before toxin-anti-toxin was used, cases 14,166, deaths 1045. In 1926 after the use of toxin-anti-toxin, cases 7351, deaths 477 Bottles, nipples, dishes, spoons, etc., used in feeding infants should be carefully cleaned and boiled before each feeding. Flies—germs carriers; are great enemies of infants. They should be prevented from contaminating their food, dishes and playthings, and should be kept away from the babies themselves. The same applies to mosquitoes and other insects.

3. *CHILDHOOD*:

This is the age of the so called diseases of childhood. Measles, whooping cough, mumps, scarlet fever, chicken pox, etc. Try and prevent exposure. Healthy, well nourished children exposed usually have light attacks. Have a doctor and follow his directions.

Diet: Essentially the same as in infancy except more and meats in moderation—once daily. Sweets are essential but should be given after meals rather than between meals, otherwise overeating is indulged in at the expense of essential foods at meal time. Over eating should be discouraged.

Vaccination for smallpox should be given certainly before the child begins school and earlier if cases appear. Even as early as six months. The child should be taught the fundamentals of hygiene during this period, particularly with reference to the care of the body, the teeth, elimination habits, diet, exercise.

4. *ADOLESCENCE AND YOUNG ADULT*:

This and future ages will take care of themselves if previous fundamentals are obeyed. Character building, sportsmanship, courage, endurance, will power, self-control, honesty, citizenship, etc., should be stressed.

This is a period of excessive energy that must be carefully regulated as regards work, play, etc., otherwise, the crop of physical, mental and moral derelicts will increase. There is no serious trouble with this age provided parents have secured the confidence of their children. This is important.

Typhoid and Tuberculosis sometimes appear. Typhoid is absolutely preventable but it is a community problem. The disease is contracted only by swallowing the germ and the germ comes only from the excreta of patients or carriers. Sanitation and hygiene is the answer. The general death rate will not be materially lowered until good water, clean food and dairy products, and proper disposal of human excreta is required. Typhoid vaccines are good but of secondary importance.

Venereal disease begins its ravages usually in this period. Sex education is extremely important. The home is probably the best school for this. Parents should not shirk their responsibility.

Tuberculosis is frequently avoided by keeping fit. The victims of tuberculosis usually come from the undernourished, the overworked or the overplaying individual. Fresh air, good food, sunshine and plenty of sleep with thought about exposures, will prevent much tuberculosis.

5. *YOUNG ADULT TO MIDDLE AGE*:

Dangers:

Excessive eating.
Under exercising.
Overwork.
Lack of recreation.
Automobile riding.
Constipation.
Obesity.
Worry.

The above are the principal health evils during this period. Violation encourages lowered resistance and increases the probability of degenerative diseases.

Excessive eating with its attendant evils of overwork, under exercise, too much riding in automobiles, favors constipation, the laxative habit and obesity.

Obesity favors diabetes, high blood pressure, and other ailments that take a frightful toll of life and at the time of the greatest usefulness. Worry from whatever cause, financial or otherwise, play its part in the production of real and fancied illnesses.

6. *OLD AGE*:

If the machinery has been properly cared for this epoch will be filled with happiness and

joy otherwise it is characterized by gloom and misery.

The degenerative diseases—heart, kidneys, blood vessels, are increasing rapidly, so are diabetes and cancer, largely because simple health rules are not obeyed and practiced.

The cost of sickness in the United States has been calculated and estimated by Homer Folks, Secretary, State Charities Aid Association of New York City, as $3,729,935,376.00. This amounts to $31.08 per capita. These figures represent the money paid physicians for diagnosis and treatment, dispensaries, hospitals, nursing, medical supplies, sick room equipment, dental care, loss of wages, and the amount expended for treatment by quacks.

His estimation of the loss from future net earnings due to premature deaths he puts at $12,000,000,000.00. These figures are stupendous and the sad part of it is that the total amount of money expended for preventing diseases by public and private sources amounts to only $76,290,000.00 or .63 per capita.

The experience of the Metropolitan Life Insurance Company definitely proves the value of health instruction for the masses. In 1911 they began to instruct their individual policy holders how to stay well. This was the vision of Haley Fisk who believed that health instruction would be a definitely beneficial economic asset. His vision has been amply verified.

In seventeen years the life expectancy of their individual policy holders increased from 46.6 years to 56.4 years. This is 9.8 years which is considerably better than the expectancy of the general population which was only 6 years. The death rate of 1000 policy holders in 1911 was 12.5 per 1000, and in 1928 it was 8.6.

Harry H. Moore, Ph.D., estimates that $2,000,000,000.00 are lost annually by people who suffer from slight and chronic illnesses. The Bureau of Economics Research states that the total income in the United States for 1829 was $100,000,000,000.00. Fifteen or more billion dollars for sickness and deaths, a great deal of which is preventable, presents an economic problem that needs correction.

What are you going to do about it? Its your responsibility.

1. Who is going to advise you? Some well meaning but ill advised friend or relative,—a druggist, a careless lazy doctor who prescribes without examination, or a good doctor who keeps records, makes careful examinations, and seeks to discover and remove your trouble.

2. Are you going to accept advice and follow directions, or get the hammer and begin knocking?

The Medical profession will always be just as good as the public demands and no better.

Think this over and let your better judgment be your guide. Stop giving your friends and relatives advice for you might be advising the wrong thing.

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*THE DIAGNOSIS AND TREATMENT OF FRACTURES OF THE SKULL

Report of 419 cases
Edwart T. Newell, B.S., M.D., F.A.C.S., Chattanooga, Tenn

It is my desire tonight to discuss briefly fractures of the skull. These fractures are of such frequent occurence in late years, due to the high powered gas and electric driven machines and machinery that I feel a paper dealing with this subject will be of interest.

The early recognition of the exact condition with which you are dealing, should *influence* the prognosis, *simplify* the treatment and *reduce* the morbidity and mortality. Injuries to the head in some instances are so preceptible and so destructive, as to require only a casual examination to correctly diagnose the condition present. Other head injuries, may be obscure, yet serious, and often escape the most careful examination, unless you always keep uppermost in your consideration of each case—that a patient with a head injury may have little or no outward appearance of injury and present only slight clinical manifestations, yet the brain, its covering, or its vessels may have sustained a severe injury. Brain trauma-manifests itself in various ways and at irregular intervals—from a few hours to weeks or even months following the injury. In other words, the extent of the damage to the scalp and to the skull; as well as the absence of bone injury; does not indicate the extent of the brain

*Read before the Spartanburg County Medical Society. March 22, 1929.

trauma, and is of little value in the prognosis of the average case.

All of you have in your files, records of cases, or can remember many cases that had extensive lacerations of scalp with destruction of bone and loss of brain substance—from minute particles to an ounce or more—yet the patient recovered and had no post operative morbidity, save an ugly scar and a depression where the surgeon removed the depressed and comminuted fragments of bone.

In contrast to the above, all of you have had cases that received so small an injury to the head, that the patient did not consider it of sufficient moment to call in a physician or if a physician was consulted, the history of the case made little or no impression on him—the subjective and objective symptoms were almost nil—yet the patient without word or warning, a few hours after consulting the physician, was taken with a convulsion, passed into coma and died before the physician could arrive, or before operative interference could be instituted to save his life.

These two types of cases are classical—the pathology is known and understood by most of you, yet we are not diagnosing and treating all head injuries—in general—as well as we should and why?

First—All types are not clear cut.

Second—We do not have an opportunity to observe cases as we should. They should all be hospitalized and classified.

From a practical viewpoint in the treatment of Head Injuries, there are six major diagnostic points to be considered.

First—Concussion of the Brain.

Second—Contusion of the Brain.

Third—Laceration of the Brain.

Fourth—Increased Intra-Cranial pressure from hemorrhage.

(a) Sub-Dural.

(b) Extra-Dural.

(c) Cerebral.

Fifth—Increased Intra-Cranial pressure from an increase in

(a) Cerebro-spinal fluid.

or

(b) From Edema of the Brain.

Sixth—The location of the bone injury—vault or base. Whether depressed, comminuted, or a linear fracture, and if the fracture is *compound*. Also if due to a foreign body.

Concussion and shock are closely allied. All severe head injuries manifest shock at first, and if rapidly fatal—the shock symptoms may merge into the intra-cranial symptoms—no sharp line can be drawn where one ends and the other begins.

Concussion—of the brain is supposed to represent those cases of mild head injuries where the pathology is described as a venous congestion, and the symptoms present a short period of unconsciousness, usually followed by headache, nausea and frequently vomiting. The pulse is usually rapid at first—later becomes slow and weak. The blood pressure is low—patient pale, as in shock, and skin cold. There is no elevation of temperature in "true" concussion—temperature means contusion or laceration. *Contusion* of the brain may be described as a severe concussion. All of the symptoms noted in concussion are exaggerated—the *unconsciousness*, is deepened and prolonged; the *vomiting* is projectile in character—the *pulse* is weak and slow—the sphincters relaxed—involuntary micturition and defecation; *blood pressure* low. The pathology is described as a bruising of the brain tissue with hemorrhage of the pia and into the sub-arachnoid spaces. There may or may not be a fracture. Cerebro-spinal taps show no blood in *concussion;* but blood in *contusion,* the same as in *laceration,* except less in quantity.

Laceration of the brain as its name implies, consists of actual laceration of the cortex. The condition is serious and is due to fracture of the skull or to gunshot or other penetrating wounds. The hemorrhage may be extra or intra-dural and later produces an increase in the intra-cranial pressure.

The middle meningeal artery is frequently torn, when a fracture line crosses it, producing sub-dural or extra-dural hemorrhage, and later followed by increased intra-cranial pressure. The hemorrhage is usually slow—the patient usually regains consciousness after the injury, only to suddenly collapse later when the intra-cranial pressure is greatly increased, as the result of a large collection of blood causing pressure on the brain.

Unless the dura has been ruptured at the

time of the injury, the clot may remain as extra-dural, and its removal is accomplished by simple trephine operation over the site diagnosed, by either stereoscopic radiograms or by pressure on a definite brain area.

Intra-cranial pressure always follows severe brain trauma and its presence is the most *important question* to determine in any head in the cerebro-spinal fluid from contusion of the skull can produce hemorrhage or increase in the cerebro-spinal fluid from contusion of the brain. Both conditions increase "intra-cranial pressure," but the chief and most serious condition that increases intra-cranial pressure, is *Edema* of the brain. This swelling of the brain may increase until it finally encroaches upon the medullary centers, slowing the pulse and respiration. By a compensatory effort the blood pressure is increased. The more the intra-cranial pressure is increased, the more the blood pressure is increased, until the final state of increased intra-cranial pressure is reached; when the respiratory and circulatory centers can not further respond to the stimuli-fail-with rapid pulse, rapid and labored respiration (stertorous or Cheyne-Stokes) and death. The heat centers are disturbed early, as the edema of brain increases, with a general rise, until before death the temperature goes to 105 degrees or more. I have never seen this high temperature fail to develop, in a case that terminated fatally, unless the patient died within a very few hours after the injury.

Gunshot wounds of the brain or any foreign body that penetrates the skull, has the same effect as a fracture—laceration—increased intra-cranial pressure—hemorrhage—and death unless the pressure is relieved by spinal tappings; decompression operation; or the edema is checked by intravenous injections of hypertonic solutions of sodium chloride, magnesium sulphate, or glucose.

The location and extent of the fracture is important. Vault fractures are less serious than basal fractures; however many *vault* fractures, from an X-Ray standpoint are clinically basal fractures as well—especially is this so in adults. The fracture lines in the soft flexible skull of the young, do not extend to the base as they do in the more friable bones of the aged.

The basal fractures are more serious, as the vital centers and nerves are more easily involved, notably medullary compression, cranial nerve palsies, and paralysis. The basal fractures are especially serious because the nose, pharynx and external ear, are often opened into by these fractures, followed by infection and meningitis. In such cases scrupulous cleansing and asepsis, rather than the use of strong antiseptics should be the procedure of choice.

In fractures of the base of the skull—the mortality as a rule increases as you pass from before backwards. The anterior fossa is least; the middle fossa is next, and the posterior fossa is greatest. This is a point worth considering in the prognosis of a given case.

COMMINUTED FRACTURES, as a rule, are more serious than simple ones, provided they occur in the same region. COMPOUND FRACTURES require immediate attention in all cases—as soon as the shock of the injury is over—to prevent infection of the meninges. A compound linear fracture, is a potential source of infection, and should be thoroughly cared for. Since fractures can not always be diagnosed by X-Ray—it is well in closing a supposed simple scalp wound, to look for linear fracture, and to remember that you *can* wipe the blood from a suture line but *not* from a fracture line.

GUNSHOT WOUNDS of the brain are usually fatal, although, as in a recent case I treated, the bullet penetrated from side to side, extending through the cerebrum, and did not produce sufficient trauma and edema to cause the death of the patient.

IN THE DIAGNOSIS of a brain lesion following an injury, a well taken history, as in all other instances, is of *first* importance. The history alone, in some cases will lead to the correct interpretation of the condition within the skull.

Second in importance—is the correct interpretation of the pulse rate. The patient at first usually suffers from a shock, and has a rapid pulse with a low blood pressure. The pulse slows as the shock is recovered from and continues to slow, if there is any increase in the intra-cranial pressure. It requires close and careful observation of the pulse rate to appreciate the small and fine changes, indicative of brain pathology. When the pulse is

slow and bounding—fifty or less, you are dealing with a well developed increase in "Intra-Cranial pressure," and this alone is sufficient indication for operative interference, especially after you have observed the case and noted the decided drop in pulse from 120 to 50 in the first twenty-four hours. The blood pressure is usually high, when the pulse rate is low. If the pulse become rapid after having been down to 40 or 50 beats per minute, you have lost the opportunity for operative interference to benefit the patient; for once the pulse again becomes fast, the course to a fatal termination is rapid and certain.

Third—I would place the *Temperature*. The temperature is usually normal or subnormal immediately after brain injuries, but in a mild injury within twenty-four hours it rises to 99 2/5 to 100 2/5. In a *serious* injury the temperature rises rapidly reaching 104 or 105 or even 106 in the first twenty-four hours. This condition with a slowing pulse is indicative of rapidly increasing intra-cranial pressure. Such extreme temperatures are not indications for operative interference; they are quite positive signs of impending death.

Fourth—I would place the Respiration. The respiratory effort at first is practically normal in a mild ordinary brain injury. As the intra-cranial pressure increases, it becomes labored and slowed. When the pulse is slow and the temperature is high, and the blood pressure high, you will find the respiratory effort labored; stertorous in character; and when death is impending, it will be of the Cheyne-Stokes type. A good clinician can observe closely the pulse, temperature and respiration and tell accurately the progress of his case.

Fifth---I would place Stereoscopic X-Rays, Bilateral views. The extent of the bone involvement, *injury*, can by this method, be estimated; the possibility of hemorrhage determined; the probability of compression of the brain from a depressed fracture ascertained, and more important, the determination of the likelihood of the fracture line extending into one or more of the basal fossae.

Sixth—I would place the use of the mercury manometer. By the judicous use of this instrument, you can tell immediately following a brain injury, whether there has been a contusion or laceration of the brain or sub-dural hemorrhage. And later, you can measure and estimate the brain trauma by the amount of spinal fluid pressure, indicated by the height of the column of the mercury. This diagnostic measure can be transformed, to one of treatment, by allowing the escape of spinal fluid and blood, until the spinal pressure is reduced to a little above normal. In cases where the trauma has been massive do not withdraw much fluid for fear of medullary compression.

Seventh—I would place the use of the Opthalmoscope. The early opthalmoscopic examination of the eye grounds is usually normal. Later in the progress of the brain injury, there is an increase in pressure. You will notice at the inner margin a venous conjestion, to be followed, provided the edema of the brain is great, by choke discs. An ophthalmoscopic examination should be made in every case. It is simple, effective and may be the first clue that you have of the increase of intra-cranial pressure.

Treatment—The treatment of concussion of brain, rarely requires more than rest in bed for ten days or two weeks; ice caps to head, liquid diet, saline purgation and possibly the administration of hypertonic solutions of saline, glucose or magnesium sulphate. A few rare cases of "Concussion-Contusion," demand bolder treatment. For relief of pain or restlessness, Strontium Bromide-per rectum or orally, or if pain is severe codeine or morphine.

Contusion and laceration of brain require, in addition to the above treatment, "spinal tappings," in mild cases, and wide "decompression operation" in grave cases. A great many men, however, are able by repeated "spinal taps" where brain trauma has not been too great, to obtain splendid results in cases that were formerly treated by decompression operation. Dr. Sack's to the contrary. Dr. Dandy has little faith in spinal tapping as a curative measure in brain contusion or laceration, but William Sharp, Cushing and others recommend it. The mere fact that the skull is fractured is not an indication for trephining, as was the custom twenty-five years ago.

It is the extent of the BRAIN INJURY that necessitates operative interference. When the brain has been lacerated, bruised and contused

to any considerable extent, nothing short of an immediate wide decompression operation will save the patient. If the patient is greatly shocked, it is well to wait until he comes out from shock, before operating.

Operation can be done under local or general anesthesia. Local anesthesia is indicated in all serious cases.

Unless a large extra dural hemorrhage is found under the fracture line, the dura should be opened in all cases, bleeding checked, soft rubber drainage instituted; muscles and scalp closed with interrupted sutures and free drainage encouraged. The rubber tube is removed early, patient is disturbed as little as possible, head is especially not to be shaken in transit to and from the operating room and X-Ray Department. In serious cases the radio-grams should be taken in the patient's room. This can be done without discomfort and without the patient's knowledge. X-Rays are of invaluable service, when the patient has received multiple injuries. I have in mind several cases, where the patient had a fractured pelvis or fractured femur or other trauma, and had it not been for the X-Ray taken of the patient's head, I would not have known for possibly twenty-four hours that the patient had a *fractured skull.*

CASE REPORTS:

The cases to be reported are taken at random from 419 cases of fractured skull that have been treated in the Newell Clinic in the last twenty years.

Cases No. 1.—16.

Summary

1. A thorough examination should be made of all head injuries regardless of how *apparently* innocent they may appear. Brain injuries often complicate other conditions.

2. Hospitalization is essential for further observation and care.

3. The History—The Physical—Interpretations of the Pulse, Temperature, Respiration—Radiograms—Mercury Manometer and Opthalmoscopic findings; singlely and collectively, should lead you to a correct Diagnosis—Prognosis—and Treatment.

4. The all important question in fracture of the skull is the condition of the brain and its covering. Treatment should be directed to the relief of the increased intra-cranial pressure—hemorrhage and the edema of the brain.

5. Early decompression operation is the only hope in severe brain trauma.

6. Basal fractures will always take their heavy toll.

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*TUBERCULOSIS OF THE STOMACH WITH REPORT OF A CASE

By G. T. Tyler, Jr., M. D., Greenville, S. C.

A male negro, aged 36, a stone-mason, was admitted to the medical service of the Greenville City hospital, Oct. 17, 1923, complaining of pain in the epigastrium, nausea, and vomiting. The symptoms had lasted several months, gradually increasing in severity, until on admission, he could retain nothing. He was constipated and had hemorrhoids. The family history was unimportant. He was the sixth of seven children.

The past history showed good health until five years ago, when he had 'flu.' One year ago he had fever, supposed to be typhoid; and in the latter part of that year, a Neisser infection. Four months before admission his appendix was removed. Following this operation, he was not relieved; but remained in bed until he was readmitted to the hospital.

Physical examination: A tall slender man, poorly nourished. The general examination was negative except for tenderness in the epigastrium. There was no evidence of pulmonary tuberculosis: no mass in the abdomen. The blood Wassermann was negative: Hb 70%: white cells 5,200: polymorphonuclears 50%: small mononuclears 29%. The Ewald test meal gave a total acidity of 60. Occult blood was present: gross blood appeared in the feces. There was a 72 hour retention of barium in the stomach by X-ray. The urine had pus. There was a shadow in the right ureter thought to be a calculus, though the total phthalein was 65%, and the right kidney pelvis said to be normal.

The diagnosis of gastric ulcer was made, and the patient was given belladonna, bismuth, calcium, and soda. He improved for a time; but

*Read by title before the South Carolina Medical Association, Charleston, S. C., May 9, 1929.

his symptoms returned in a month. He was then transferred to the surgical service. Operation was advised and performed Nov. 26, 1923. Through a right rectus incision the stomach was exposed. There was a mass in the pyloric region occupying about one third of the stomach. Glands were palpable along the greater and the lesser curvatures. The organ was movable: the condition thought to be cancer. A resection was done with an anterior Polya anastomosis. Recovery from the operation was uneventful until 3 weeks later, when ascites appeared, and the hemorrhoids returned. These were removed. The ascites disappeared; and the patient left the hospital much better. He had occasional attacks of vomiting. When careful in his eating, however, he had no symptoms.

It was not possible to follow him after leaving the hospital. Some time, about a year, afterwards, I learned from the bureau of vital statistics that he had died in May, 1924 of cerebral hemorrhage.

The specimen of stomach was torn along the lesser curvature during operative manipulation; but no gastric contents escaped. The serous surface was glistening. The mucosa was much thickened and ulcerated. The report from the laboratory was tuberculosis of the stomach; tubercles with giant cells being found. Unfortunately a review of the sections is impossible. They have been lost.

It would be interesting to know whether this was cancer or ulcer with tuberculosis. The thickened mucosa suggests the hyperplastic type with pyloric obstruction resulting. The tearing of the specimen during removal leads one to believe that the wall had been weakened by the process. The later occurrence of ascites suggests that tuberculosis was the underlying cause, though this is not conclusive evidence. It had been planned to remove this fluid at the time the hemorrhoids were operated on; but it had gone down so much that removal seemed unnecessary.

Tuberculosis of the stomach is rare. In 2501 gastric resections at the Mayo Clinic from 1912 to 1915 inclusive, only one case was found. This was supposedly cancer until microscopic examination revealed tuberculosis. Melchior reported 6 cases from Kutner's clinic in 10 years. In 10,000 autopsies at the Leeds Infirmary, tubercular ulceration of the stomach was found in 3 cases only. In two of these it was due to involvement from without by adjacent lymphatic glands. In 320 partial gastrectomies at the same clinic, no cases were found; but in two a simple chronic ulcer was associated with scattered miliary tubercles throughout the mucosa. In a third case, cancer existed with a lesion strongly suggesting tuberculosis. There were 8 cases in 4,000 autopsies at the Johns Hopkins hospital. Gossmann in 2360 autopsies found 18 cases of gastric tuberculosis. Glaubitt found it 47 times in 2237 autopsies on tubercular patients. J. S. Horsley is authority for the statement that it is present in 2.3% of autopsies on tubercular subjects.

The literature on the subject is not large. The best paper in English is that by Broders of the Mayo Clinic in 1917. He analyzed 308 cases, and reviewed the literature up to that time, adding one case of his own. In a limited survey of the literature since Broders' paper, I have found reports of several additional cases; but was not able to analyze them. It is rather surprising that in the large number of tubercular patients the stomach escapes involvement. These patients must swallow some of the bronchial secretions. One observer has said that it is easier to obtain the tubercle baccilli in the washings from the empty stomach than from the sputum. The germ is a slow-growing one. It resists the action of acid secretions for as long as 12 hours. The motility of the stomach prevents lodgment in one place for a time sufficient to invade the wall. On the other hand the intestine will harbor the germ for long periods—which is given as one explanation of the greater frequency of intestinal as compared with gastric tuberculosis.

If, however, the gastric mucosa be not intact, and delayed motility with slower secretion occurs, then the organism can invade the mucosa, and its association as demonstrated by tubercles and caseous areas, with gastric ulcer or cancer is made possible. Other paths of invasion are the blood stream, the lymphatics, and by direct extension from contiguous tissue. In view of the small number of cases of gastric tuberculosis in pul-

monary patients, one may conclude that invasion of the gastric mucosa by swallowed bronchial secretions is one of the less frequent paths—except of course, in terminal stages. The lymphatic and the blood systems are regarded as the most frequent routes. Each of these has its advocates as to the greater frequency. Extension from perigastric lymph glands has been shown to be a fourth path. In one case, reported by Colp, the caseous extragastric glands had to be removed before the gastric vessels could be ligated. Few of the cases are primary. Broders thought none were proven so, even though no tubercular lesion was demonstrated elsewhere in the body.

The question also arises whether the tuberculosis in the stomach is the original process. From my review of the cases, I gather the impression that tuberculosis is grafted on the ulcer or cancer. Broders concludes that ulcer is the predominating lesion in 80% of the cases. One of the papers reviewed, that by Collinson and Stewart, has as its title: Chronic Peptic Ulcer with Acute Miliary Tuberculosis. How the tubercular process invaded the stomach they are unable to explain, for their patients recovered, and there was no evidence of tuberculosis elsewhere in the body. It could have come from ingested food, or from organisms in the respiratory tract. They conclude that the association is accidental, and that the type of person having gastric ulcer is less commonly the subject of tubercular infection than the general population.

Much experimental work has been done in the effort to produce gastric tuberculosis. It has been accomplished, but with much difficulty and uncertainty.

The rarity of the condition is said by Virchow and Klebs to be due to the small number of lymph follicles in the stomach. Kanzow added to this the intact condition of the gastric mucosa. The degree of acidity appears to make little difference so far as the tubercle bacillus is concerned; but a low, or an acidity makes a favorable nidus for cocci or other organisms. These probably cause a gastritis: an ulcer forms, and tuberculosis is a secondary process.

The condition has never been recognized clinically. The patients have been operated on for supposed ulcer or cancer; the first evidence being that from the laboratory—unless caseous perigastric glands demonstrate the cause. The types of lesions are: (1) ulcer, single or multiple. (2) Miliary tubercle. (3) Solitary tubercle. (4) Pyloric stenosis. (5) Tumor or nodule. (6) Lymphangitis.

The presence of syphilis may be a factor complicating the diagnosis. We know that giant cells are present also in specific lesions. Hence the importance of demonstrating the presence of the tubercle bacillus in the tissues. Broders' case, in which he demonstrated the tubercle bacillus, had syphilis also.

The treatment is operation, resection being the method of choice. Even in the presence of active pulmonary involvement operation is indicated; for disturbed digestion is an ominous sign in tuberculosis. If resection is not advisable, then gastro-enterostomy should be done in the hope that the patient's condition will improve, and that radical excision can be done later. In one recorded case, the involvement was so extensive that only gastro-enterostomy was done to relieve obstruction. A piece of tissue showed the condition to be tuberculosis. This patient recovered, and was completely restored to health. Lyle reported a case where the patient, an alcoholic, recovered following a resection of the stomach for supposed cancer. The tissue was malignant with tuberculosis. This patient returned two years later with symptoms of intestinal obstruction. The abdomen was opened, and miliary tuberculosis of the intestines and peritoneum was found. The obstruction was from atony. Death occurred in two days.

The prognosis is guarded. Though some patients have lived as long as ten years following resection, they must be kept under observation for fear that tuberculosis, if it has not already done so, will later manifest itself elsewhere in the body.

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DISCUSSION, "VEGETABLE FOOD AND THE GOITER PROBLEM" ** REMINGTON

(Paper Published in June Issue)

Dr. William Weston, Columbia: I wish I had time, in the very few minutes allotted to me, to go into this matter as I should like to go into it with you, because I feel that the steps South Carolina is taking to promulgate this knowledge and to develop South Carolina resources are of such extraordinary value that you, the physicians of South Carolina, should be among the first, certainly, and perhaps the very first, to know about these plans, because you will be called on very liberally to help in this matter.

Dr. Remington has shown you the most extraordinary situation in regard to this mineral element so far shown in the world. We do not know that this will be duplicated anywhere, because nature is very strange in the distribution of her elements. We do not know why she distributes them as she does. Take carbon, for instance; if you go to Texas and Oklahoma you find she distributes carbon in the form of oil and natural gas; if you go to West Virginia you find carbon in the form of bituminous coal; go to Pennsylvania and you find it in the form of anthracite; and if you go to South Africa you find carbon in the form of diamonds. We do not understand nor can we explain this peculiar distribution, nor can we explain why nature has put such a peculiar limitation upon these organic elements. We have recently learned that the metabolism of iron depends upon certain other substances. It is certainly true that the metabolism of iodin depends upon other substances which we believe exist only in the foods of South Carolina. But now what great importance does the chemical profession lay upon this matter? This volume I hold in my hand is the most recent publication of the American Chemical Foundation. In this volume is an article by Dr. David Marine, of Columbia University, and the part of the article I shall read to you is the comment of Dr. Julius Stieglitz, of the University of Chicago. This is merely a comment on the work of Dr. Marine among children in Ohio. He expresses it in this way:

"This resulting world-wide movement to insure sufficient iodin in the diet to prevent * * * * * * * * * * *"

Is all this true that Dr. Remington announces? McLendon comes here and runs the test in quadruplicate and says it is true; that he does this same analysis in the laboratory of the University of Minnesota and says it is true; the methods seem to be proper, the results correct. Then I go to Washington and ask the United States Department of Agriculture to send its head chemist here to look into this matter. They say, "We have the data, and we accept them." We go to Chicago and ask the American Medical Association to check it up, and they say they have full confidence in it in every respect and are going to publish it all and indorse it all, because they feel it is the most complete work of its kind being done today. I asked McLendon the question, "What do you think of the equipment of this laboratory?" He said it is the best equipped laboratory of its kind in the United States. When I asked for suggestions he said, "Enlarge it to the point where you can make complete studies." I discussed it with the authorities of the State of South Carolina, and they told me to go ahead; I discussed it with the authorities of the Medical College of South Carolina, and they told us to go ahead. So, gentlemen, you are going to have in the Medical College of the State of South Carolina the most complete laboratory for the study of food in the world. For what purpose? Because this suggests the fact that South Carolina may have many resources. We know some that have hardly been mentioned. We are going to work them out and publish them to the world. In regard to this particular one Dr. Remington has been speaking about, we do not have to publish that; the American Medical Association will pay for every nickel's worth of advertising you ever got and disseminate it throughout the world. The business men throughout the United States will advertise it. Just yesterday, in my office, one of the men who helped organize General Motors said, "If you will let us in on this we will see that South Carolina has the opportunity to produce all the food she can produce, and we will see that is is distributed to the world."

Dr. Ben F. Wyman, Columbia: I had not intended discussing this paper of Dr. Remington's until Dr. Weston a few moments ago asked me to say something about the goiter problem among school children as shown by a recent survey.

At the Department of Health, in Division of School Sanitation, we have been conducting a survey of thyroid enlargement for several months. Up to this time about 20,000 school children in South Carolina have been examined in the 20 counties that have whole-time health

departments. The classification of thyroid enlargement used by these doctors was merely positive or negative, based upon the visual or easily palpable enlarged thyroid gland. We divided the State into 3 groups, namely Coastal, Central and Piedmont. There was a very significant finding in this survey which is in keeping with Dr. Remington's findings of iodin content in Irish potatoes. Dr. Remington found more iodine in the Piedmont group than in the Coastal. We, in turn, from our examinations, found that the Coastal counties averaged about 3% of enlargement, the Central counties about 2½% and the Piedmont counties about 2%. These percentages would probably vary on a more complete survey.

Due to the request of Dr. Weston and the Governor, Dr. Robert Oleson, who has been specializing in goiter surveys conducted by the United States Public Health Service, came to this State and helped us make some determinations. The classifications used by Dr. Oleson are as follows: very slight, slight, moderate, marked, very marked and adenoma. The terms used being indicative of amount of enlargement found in thyroid gland. Following out this classification you must realize that if you find a thyroid gland which shows even the slightest enlargement it may have been classified, according to some authorities, as not only an enlarged thyroid but as goiter.

In discussing the question of the location of thyroid enlargment in South Carolina the United States Government has just recently issued a Bulletin which shows that goiter is more prevalent in the mountains of Tennessee than in the plains. The exact opposite is true in South Carolina. We believe this is due to the fact that the mountains of Tennessee are of limestone formation, whereas the mountains of South Carolina are of granite formation.

Just one thing more, as to the incidence in boys and girls and in negroes and whites. The incidence in boys in South Carolina is lower than in the girls, and the white as against the black makes a very striking contrast. The colored are very much enlarged as compared to the white. In other words, the white children of South Carolina, whether boys or girls, have a very slight number of enlargements as compared with the negroes. In our survey we examined with Dr. Olesen about 5,000 cases, and we found the colored girls have the greatest percentage of enlargements. What is the duty of these people who have thyroid enlargements? We believe that those people who have these enlargments are not partaking of the opportunities that are presented to them. Merely living in South Carolina does not prevent goiter. As you know, the negroes like molasses and bread and meat; they do not have gardens and do not have cows.

We hope this work will go on to completion and that we shall be able to present reports from time to time.

Dr. F. H. McLeod, Florence: The inspiration of Dr. Weston in investigating the high iodin content of South Carolina grown food products has met with state-wide enthusiasm, and it is greatly to be regretted that the Food Commission who are so splendidly trying to further the interest of the State by giving proper publicity to this important discovery, have been handicapped for want of funds. I trust that money will yet be available so that the commercial side of this matter may be properly presented to the goiter stricken areas of the country. It is necessary for us either to bring these people here, which is not practicable, or to send our food to them. It is a tremendous proposition, full of great potentialities, and will take money.

The State of South Carolina has had a long, drawn-out economic problem to solve and appropriations have been influenced by these conditions. But it is hoped that the commercial possibilities of this proposition will present themselves in such manner to the legislature that we shall not be handicapped at this time.

In the discussion of Dr. Tyler's excellent paper last night, it was suggested that the proper way to interest the legislators in the State's needs was to acquaint them fully with just what was needed, and the suggestion was made that each county society have a meeting to which its representatives and senator were invited, and that such matters be fully discussed as pertained to the needs of the medical association as regards public health and other matters, and especially at this time, the presentation of the iodin situation.

In Florence we are most optimistic and we are very appreciative of the reception you gave Mr. Conard's iodin song. I should like Mr. Conard to stand so that you might see the author of the song. Mr. Conard denies that he is a musician, but the character of his work would indicate otherwise.

Dr. N. B. Heyward, Columbia: It all sounds too good to be true. I hate to be in the position of a pessiment, because I am primarily an optimist, I think. My friends know I am optimistic about most things. At the time Dr. Remington started his survey in this state I had the only available figures on the goiter percentage in our people in this state. Some of you may remember that two or three years ago, at our Anderson meeting, I reported the results of the examination of three thousand students at the University of South Carolina. I had a map of the state shown there which indicated where the students with enlarged thyroid lived. I am not

sure of my figures, but my recollection is that in the university among those young adults the percentage of palpable goiters ran around ten or fifteen per cent. in the boys and among the girls ran up into thirty per cent. I do not know that these boys and girls ate South-Carolina-grown vegetables regularly. Somebody has to hold down this enthusiasm, or we shall get too enthusiastic. If we can sell South Carolina vegetables all over the country, maybe our farmers will get prosperous and we can collect something out of them again. But don't get the idea that we have no goiter in South Carolina, for we do have it. Certainly the figures I have been able to get in the University of South Carolina are not in line with the figures obtained in the examination of school children, just quoted.

Dr. Remington: I want to say just a word in supplementing what Dr. Heyward said. He was very kind in furnishing me a copy of this report. I tried to study it, but from the information available I could not quite correlate it to definite local areas in the state.

Dr. Francis L. Parker, Charleston: I should like to say a few words from the chemical viewpoint in regard to the determination of iodin in waters and vegetables. Since iodin is present in such exceedingly small quantities, it has been suggested by some that perhaps these figures may be wrong and that they have no significance, in that the amount of iodin is estimated in parts per billion; and I have been asked how one can estimate substances in terms of parts per billion. I shall not go into technical details but shall give you a simple illustration which may perhaps explain it.

Some years ago I was testifying in court and made a statement under oath that some waters contained three million bacteria per cc. I was asked if I had counted them and replied that I had. I was asked how long it took, and I said that it took less than a minute. I was then asked how I could count three million in one minute. I said that I had inoculated three plates, having previously diluted the water one million time. I found three colonies on each plate, so to count three million it took about as long as to count three. I am confident that the results obtained by Dr. Remington are just as reliable as the results obtained anywhere. I have on a great many occasions visited his laboratory, with the viewpoint of ascertaining for my own interest whether or not these experiments were carried out as carefully as they should be carried out; and I am glad to say to the gentlemen of this association that they need feel no doubts about the accuracy of the work.

Just one word regarding the difference between inorganic iodin and organic iodin. I have been asked if there is any essential difference, if iodin is not iodin. In recent years we have found out that very small amounts—amounts so small as not to be ordinarily appreciable—of organic matter produce very striking results. We all know there are two classes of matter, organic and inorganic, and that people live mostly on organic matter. I do not think think there is any doubt that there is an essential difference between iodin existing in inorganic matter and iodin existing in organic matter.

These questions have been asked me a number of times, and from a chemical viewpoint the answers to them are evident.

Dr. Samuel Orr Black, Spartanburg: I have listened with considerable interest to the remarks of Drs. Remington and Mason.

It so happens that up in the city of Spartanburg up to the present time we have had about four hundred cases of goiters. I feel that we are acquainted with the therapeutic indications and the use of iodine in goiter.

It is the drug par excellence for the prevention of goiter in children.

Dr. Remington has told us in detail of its evidence in South Carolina grown vegetables and its prevalence as compared with the same vegetables grown in other states in the Union.

Being a physician I am primarily interested in the effect of these vegetables on the prevalence of goiter.

I did not hear the essayist say one word as to South Carolina's vegetables therapeutic effect on goiter in any one of its varieties.

I feel that these should be fed to animals and that exhaustive studies and experiments should be made using suitable controls in all instances before we say too much about their effect on this particular disease.

In the last forty or fifty cases of goiter that we had in the Mary Black Clinic there is an increasing proportion of toxic cases, especially of the hyper-plastic type.

What I want to know, Mr. President, is, what is the therapeutic value of our vegetables and their relatively high iodine content in the treatment of goiter.

Is this a medical or an agricultural proposition? If the latter, or if we are to advertise it as California has its grapes, Florida, its oranges, and Cuba, its sugar cane, then, well and good.

If it has therapeutic properties, let's hurry and find it out and label it as such. In other words, let's be honest about it here in our Medical Society and let's make no statements that we will later have to retract.

Dr. T. M. Dulin, Clover: The legislature of South Carolina this year appropriated $50,000 for this work. Last year it appropriated $15,000.

Personally, I have heard of more goiter in the last three or four years than in ten or fifteen years before. I tell you, gentlemen, we had better touch this matter lightly. If this propaganda is borne out by truth, then well and good; if it falls down, then our state will be hurt.

Dr. Weston: I think it has been an observation ever since 1852, when Carpin, a French chemist and investigator noted it, that goiter is practically absent in those areas where iodin is an important factor in the food supply. I do not believe these gentlmen can point to a single investigator, since that investigation by Charpin was made, who has disproved that. I have made an investigation into many cases of goiter, and in none of those cases were they either vegetable eaters or milk drinkers except on rare occasions, perhaps, when they went to a party and ate some asparagus grown in California. A careful examination of vegetables in cans in the grocery shops showed that ninety per cent. of them were grown in the goiter area. Now, South Carolina has definitely pledged herself not to make any statement not borne out by the highest authorities, and these gentlemen need not feel that there is any man on that commission who would compromise South Carolina in any way. Every gentleman on the commission is jealous of the good name of South Carolina and will do nothing to reflect on that good name.

Dr. R. E. Hughes, President: The Chair would like to add, in comment on Dr. Black's remarks, that in the upper part of South Carolina there is a large element of the Tennessee and Southwestern Virginia mountain people that have come in, and that probably accounts for a good proportion of the goiter cases. I know Dr. Black gets a good amount of work from my town, the population of which is made up largely of these people—not native South Carolinians. This may explain the prevalence of goiter.

Dr. E. F. Parker, Charleston: I know very little about goiter and iodin, but I do know one thing, and I know that this is a most opportune time for the association to congratulate Dr. William Weston for his persistent endeavor to bring this matter forward, which has resulted in bringing the State of South Carolina into the limelight, even if it does not accomplish more than that—and I am sure it will. I move that we congratulate Dr. Weston and thank him.

Dr. Samuel Orr Black, Spartanburg: Will you indulge me the second time?

It was not with any reflection upon any member of the committee, at all, that prompted my remarks. I simply meant to ask the question, if any work has been done, or is now being done that will establish the therapeutic effect of our vegetables in the prevention and cure of goiter. No one gainsays the value of iodin in goiter. It has its place, not only in preventing simple goiter in children, but also in the preparation of the hyper-thyroid patient for operation.

Dr. Remington, closing the discussion: Actual experimentation on human subjects is not an easy thing to do. We are just beginning at the present time a cooperative experiment with the Child Welfare Institute of the University of Minnesota, which is supported by the Rockefeller Foundation. We are entering on a program by which we agree to furnish this institute sufficient South Carolina products so that they can feed these children a leafy vegetable, a potato, and a root vegetable every day for a year or more. Very careful observations will be made, including x-ray studies of the bones, etc., and the data carefully collected. In addition to that, we are starting a rat colony in Charleston, and as soon as we get a sufficient number of rats we will undertake to gather some data which we hope to present at a future date.

SOCIETY REPORTS

THE RIDGE MEDICAL SOCIETY MEETS

The Ridge Medical Society met in Dr. Timmerman's offices, Monday, June 17, at 8 P. M. Dr. O. P. Wise acted as Chairman, due to the absence of the President.

Dr. G. R. Westrope favored the meeting with several beautiful violin selections which was unusual for us but quite highly appreciated.

Dr. W. P. Timmerman gave a short report of the meeting of the State Medical Association in Charleston which elicited some comments from Dr. C. H. Blake who also attended the meeting.

Dr. Timmerman read several communications on matters pertaining to the Association and other phases of medicine.

Dr. C. H. Blake of Greenwood read an interesting an instructive paper on cerebral injuries during labour.

Supper was served in the Commercial Hotel and was graced by the presence of the Ladies Auxiliary as our guests.

After supper Dr. Westrope rendered several violin solos. He is the County Health Officer of Lexington County.

Drs. Westrope and Able were appointed an entertainment committee (musical). After practising in Langley for the past few years Dr. K. L. Able has again located in Batesburg.

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL, TUESDAY EVENING, JUNE 25TH, 1929, AT 8:30 O'CLOCK.

The meeting was called to order by the President, Dr. Henry P. Jackson.

Present: Doctors; Banov, Beach, Buist, Burn, Cathcart, Jackson, Kollock, Mood, Palmer, Rhame, W. A. Smith (11).

The minutes of the meeting of June 11th were read and confirmed.

Under Reports of Officers and Committees, Dr. C. W. Kollock, Chairman of the Board of Censors, reported that the Board was somewhat nonplussed as to what action should be taken in regard to the case of Dr. E. H. Barnwell, which case had been referred to the Board of Censors, in regard to the failure of Dr. Barnwell to pay the full amount of his dues for each year previous to the current one, the Doctor having paid his dues in full for 1929. The Board, after considering the matter, felt that an error had been made in not carrying out the by-laws in regard to his failure to pay full dues prior to this year; and in view of the further fact that the Treasurer had accepted his dues for the current year, the Board recommended that he be retained in full membership, but that the Secretary write the Doctor and request that he submit the balance due the Society. On motion, the recommendation of the Board of Censors was adopted.

The Secretary announced that Dr. F. G. Cain had been appointed by the President as a member of the Board of Censors in the absence of Dr. O. B. Chamberlain. Dr. R. S. Cathcart thought that this was a matter that the Society itself should consider, and moved that Dr. Cain be elected to fill the place of Dr. Chamberlain during his absence from the city. This was seconded and carried.

Under Miscellaneous Business, Dr. R. S. Cathcart moved to reconsider the action of the Society in regard to the visiting privileges of the Hospital. This was seconded and unanimously carried. Dr. Cathcart then offered a substitute resolution, as follows:

WHEREAS, the Medical Society of South Carolina, trustee under the Will of Thomas Roper, is charged with the "erection, maintenance and regulation" of the Roper Hospital, Charleston, South Carolina, and

WHEREAS, it is considered best for the well being and conduct of any hospital that consideration should be given to the qualifications, standard and conduct of those of the medical and dental professions to whom are extended the privileges of the Hospital, Therefore

BE IT RESOLVED: That in the future the privileges of the Roper Hospital be granted only to members of the Medical Society of South Carolina and to such other white members of the medical and dental professions to whom the Board of Commissioners, with the approval of the Board of Censors, may grant the privileges.

RESOLVED, further, that any white member of the medical and dental professions may apply to the Board of Censors of the Medical Society of South Carolina for the privileges of the Roper Hospital and if approved, shall be granted the privileges of the hospital by the Board of Commissioners of the Roper Hospital.

Filed under Roper Hospital, Board of Commissioners.

This was seconded and carried. It was moved, seconded and carried that the above resolution become effective on July 1, 1929.

The Secretary directed the attention of the Society to the fact that Dr. R. B. Gantt was still sick, and moved that Dr. Gantt's dues be remitted for the year 1929, and that he be retained as a member in good standing during this period. This was seconded and carried.

At 9:00 P. M. the Scientific Program was called.

Dr. T. H. Martin reported a case of automobile injury with lacerations of the abdominal wall and fracture of the pelvis. The important features of the case, as pointed out by the Doctor, were the failure of infection to take place in the extensive lacerations, the simple method of using a Bradford frame for holding the fracture in place, and the excellent results achieved. Dr. J. P. Palmer exhibited the X-rays of this case.

There being no further business, the meeting adjourned.

W. A. Smith, Secretary.

REGULAR MONTHLY MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY, HELD AT LIBRARY HALL, MONDAY, JUNE 3, 1929.

The meeting was called to order by the President, Dr. J. G. Murray at 8:15 P. M. with 30 members and guests present.

The minutes of the last meeting were read and approved.

Dr. Roy D. Metz was then called upon who presented an admirable paper on "Functional Constipation". Dr. Metz first stated that a diagnosis as to cause should be made. A review of the physiology of defection was next given in great detail.

The principal causes were given as follows:

1. Too much purgatives.
2. Too great bulk of faecal masses and hardness.
3. Too much stimulating and irritating foods.
4. Lack of exercise.
5. Faulty mastication.
6. Too concentrated foods.
7. Excessive absorbing power of the colon
8. Disregard of desire to defecate.

The symptoms of functional constipation may be caused by pressure of the masses such as pruritis ani, haemorrhoids; other symptoms are headache, vertigo, "heart-burn", halitosis, etc., although it is not understood how these symptoms are brought about.

Treatment:

Stop so many cathartics and ennemata, 2 glasses of cold water every 2 hours, abdominal exercise for 15 minutes daily, mineral oil, agar-agar, belladonna, hyocyamus, etc. Discussed by Drs. Curran B. Earle, Wilkinson, Guess, Grimball; closed by Dr. Metz.

Detailed clinical case reports:

Dr. George R. Wilkinson

Onset begun in a young male at age of 15, five year previously. Diagnosis —Diabetes Mellitus. This patient had the first insulin given in the State of South Carolina. Urine first showed 7% sugar, and the patient was very emaciated. There was evidence of hyperinsulinism at the beginning of treatment and the treatment for this was molasses per rectum. There was also a severe attack of furunculosis. No attempt was made to keep the patient sugar-free as another attack of hyperinsulinism was feared. This patient was shown to the Society and he is now enjoying fairly normal health and is able to pursue a gainful occupation.

The second case was that of a girl age 16 who had had diabetes for the past 5 years. At first there was 6% sugar in the urine, blood sugar ranging from 300-400 mgms. There was incontinuence of urine and the patient voided about 3000 cc. per day on the average; there was also a marked tendency towards overflow of the bladder. The patient is now taking 35 U. of insulin in the morning and 25 U. in the afternoon. This girl had taken a NaC1-free diet as this salt tends to produce ascites. Dr. Wilkinson here cautioned that women taking insulin should be carefully watched as this is a frequent complication. The patient now received only 10 U. of insulin per day and is able to go about her work. Discussion by Drs. Grimball, W. S. Fewell, J. W. White, Tyler, and Carpenter; closed by Dr. Wilkinson.

Dr. Chas. O. Bates

The case was that of a negro man who had been shot in the neck 9 weeks prior to admission to a local hospital. The man's neck was very stiff the following morning following the injury and he spat up some blood; the x-ray did not reveal the bullet. One month previous to admission he spat up blood rather profusely. Physical examination revealed a desperately sick negro man who required opiates for the pain in neck and lungs. There was profuse expectoration and the neck was slightly angulated with marked swelling on the left side; there was also severe pain in both arms. Another x-ray taken at the time of admission to the hospital revealed a distinct fracture of the 4th cervical vertebra. An extension of 7 pounds was put on after which a cast was applied including head, neck and chest with the head in extension. This patient was advised to return every 10-14 days for observation. The bone trauma did not show up in the x-ray until the pathology had set in. Dr. Wolfe remarked under the discussion that failure to find the pathology may have been due in the main to faulty interpretation. Discussed by Drs. Evatt, Wilkinson, and

J. W. White; closed by Dr. Bates.

Dr. J. W. White then showed some x-ray films of a case of ankle fracture.

Under the heading of old business the matter of physician's license fees were taken up. Dr. Bruce, chairman of the committee reported that a definite concrete plan had not been submitted to City Council. Discussed by Drs. Wolfe, C. O. Bates and Tyler.

Dr. Tyler moved that the Committee submit a plan to the County Society at its next meeting, and if approved by the Society that this plan be submitted to the Finance Committee of City Council. Dr. Wolfe on amendment offered by Dr. Earle was to serve on the Committee, and Dr. Tyler was to serve on the Committee as amended by Dr. Wolfe; seconded and carried with amendments.

There being no further business the meeting adjourned.

I. S. Barksdale, M. D., Secretary.

YORK COUNTY MEDICAL ASSOCIATION MEETS

The York County Medical Association held a very interesting meeting at Winthrop College, Johnson Hall, June 12, 1929, 8 p. m. Dr. Norma P. Dunning, Resident Physician of Winthrop College, the newly elected President occupied the chair. Dr. Dunning is a charming presiding officer and by her tact and gracious manner made every one feel at ease immediately.

The meeting was not as largely attended as had been hoped but was a very creditable one from every standpoint. The routine business was dispensed with and the scientific program entered into as follows:

"The Diagnosis of Gall Bladder Disease", by Dr. Hugh Smith, Greenville, S. C.

"Brief case reports with Comments."

(1) Post-Diptheritic Paralysis.

(2) Internal Secondary Hemorrhage.

(3) Asthma of Ethmoid and Maxillary Etiology.

(4) Cerebro-Spinal Fluid Leakage, Meningitic, Recovery.

By Dr. J. W. Jervey, Greenville, S. C.

"Enlarged Outlook for Organized Medicine," by Dr. E. A. Hines, Seneca, S. C.

The discussions on all of these papers were most timely and interesting.

There were a number of visitors from nearby cities and towns. At the close of the meeting refreshments were served by the Woman's Auxiliary and an opportunity given for a very pleasant social hour.

The York County Medical Society has some of the very best doctors in the State on its roll and the evidently are entering upon an ambitious program for the year's activities.

E. A. H.

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL, TUESDAY EVENING, MAY 28TH, AT 8:30 O'CLOCK.

The meeting was called to order by the President, Dr. Henry P. Jackson.

Present: Doctors; Allen, Ball, Beach, Bowers, Buist, Burn, Byrnes, Cain, Cannon, Jackson, F. B. Johnson, Kollock, Lynch, McCrady, McInnes, Mitchell, Mood, O'Driscoll, Plowden, W. H. Price, Prioleau, Richards, Rutledge, Townsend, Waring, I. R. Wilson, R. Wilson (27).

The minutes of the meeting of May 14th were read and confirmed.

Under Reports of Officers and Committees, Dr. K. M. Lynch, Chairman of the Committee on Arrangements for the South Carolina Medical Association Meeting, reported as follows:

The convention of the South Carolina Medical Association was held as scheduled on May 7, 8, 9, 1929, with good attendance and appointments. The scientific exhibits were unusually pretentious, due largely to the efforts of Dr. J. H. Cannon of this committee. In addition to the committee members, some other members of the Society were called upon to look after details of the meetings, particularly Dr. H. H. Plowden and Dr. R. B. Taft.

Following is a complete financial report. The bills for expenses incurred have been endorsed and handed to the Treasurer for payment. The income will be turned into the treasury as collected.

Expenses

Walker, Evans and Cogswell Co., for badges	$ 45.00
Victory Theatre	75.00
Francis Marion Hotel, ball room and refreshments for Reception to President of the Association	100.90
Skuhra's Orchestra, for music	53.00
Palmetto Sign Co., exhibit signs and booths	45.15
Secretary, for registration and exhibits	15.00
Express, postage, etc., on scientific exhibits and motion picture films	8.25
Total	$342.30

Income

Income, net, from fees of commercial exhibitors, after deducting percentage due hotel	280.00
Balance, to be paid by the Society	$ 62.30

A resolution was adopted to receive this report as information, and to thank the committee for its good work.

Dr. G. McF. Mood, Chairman of the Board of Commissioners, reported as follows:

At the regular meeting of the Board of Commissioners, held on May 20th, the following resolution received from the General Medical Staff of the Hospital was read:

"Moved that the Board of Commissioners be requested to request the Medical Society of South Carolina to limit the privileges of the Hospital to members of the Society in good standing."

The Board of Commissioners passed the following resolution:

"Resolved that the resolution from the General Medical Staff of the Hospital be referred to the Medical Society of South Carolina for consideration and action."

The pleasure of the Society in this matter was then asked. The matter was discussed by Dr. F. B. Johnson, who made a motion to refer the matter to the next regular meeting of the Society as a Special Order of Business. After discussion by Dr. Prioleau, the motion was seconded and carried.

Dr. C. W. Kollock reported for the Committee which was appointed to meet with the Parent Teachers Association. He stated that it was not the object of the Parent Teachers Association to ask free treatment for the children, but simply that they were anxious to have them as near one hundred per cent as possible, and that their idea was simply to get some one to make the examinations.

It was now 9:00 o'clock, and the Society proceeded with the regular Scientific Program.

Dr. R. L. McCrady reported a case of rupture of uterus during delivery, the case having been attended by a midwife. A hysterectomy was done to control the bleeding. Patient recovered.

Dr. McCrady also reported a case of obstructed labor due to failure of dilatation of the external os of the cervix. The extreme thinness of the cervix made manual dilatation a simple matter.

Dr. J. Austin Ball reported a case of Herpes Zoster, which later developed a varicella eruption. He reported another case with orbital Herpes and varicella lesions over body. In the latter case there was some hemorrhagic eruption.

These cases were discussed by Dr. Rutledge.

The paper of the evening, "Coronary Occlusion", was then read by Dr. Robert Wilson. He reported a number of cases of this condition and showed the electrocardiograph tracings of each case.

This valuable paper was discussed by Drs. Cain, O'Driscoll and Cannon, Dr. Wilson closing.

The Society now reverted to a continuation of the business program, and Dr. A. J. Buist expressed his opinion of the subject under discussion. He gave it as his opinion that these charitable associations, Parent Teachers, etc. should go to the parents and advise them to call in their family physicians.

Dr. Banov, in discussion of the matter, said that this free summer round-up of the preschool child was a national movement by all the recognized public health bodies, the idea being to send the small child to school healthy. He said, too, that the Board of Health simply attempts to find defects and the child is sent to the family physician for correction. He explained that one of the main objects of the examination is educational, that it, to get the child accustomed to visiting his physician. The whole matter was discussed by Drs. Robert Wilson, Kollock, I. R. Wilson, Burn, Cannon, and Cain.

As no definite solution was arrived at, and as the subject was such a big one, it was decided to give the committee more time for its investigation.

Dr. Kollock made a motion that Dr. A. J. Buist be made a member of this committee. This was seconded and carried.

There being no further business, the Society adjourned.

W. A. Smith, Secretary.

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL, TUESDAY EVENING, JUNE 11TH, 1929, AT 8:30 O'CLOCK

The meeting was called to order by the President, Dr. Henry P. Jackson.

Present: Doctors; A. E. Baker, A. E. Baker, Jr., B. R. Baker, Banov, Beach, Bowers, Buist, Cannon, Cathcart, Deas, de Saussure, Finger, W. H. Frampton, Jackson, F. B. Johnson, Kollock, LaRoche, Maguire, Martin, Mitchell, Mood, Moore, O'Driscoll, Pearlstine, Richards, Rutledge, W. A. Smith, Taft, Townsend, I. R. Wilson, Palmer (31).

Guests: Dr. R. H. Lanning, of the U. S. Navy.

The minutes of the meeting of May 28th were read and confirmed.

The Secretary read a form letter from the American Medical Association in regard to hospital privileges, hospital conferences and medical society programs. It was moved, seconded and carried that the letter be received as information and that the Secretary make a suitable reply to the Secretary of the American Medical Association.

Under Miscellaneous Business, Dr. R. S. Cathcart brought to the attention of the Society, at the request of Mr. M. Rutledge Rivers, that Sir William Gray, of Canada, would make the annual address to the St. Andrews Society on the occasion of its two hundreth anniversary, on November 30, 1929. It was moved, seconded

and carried that the Secretary write Sir William Gray and express the gratification of this Society in having him come to Charleston on this occasion, and the hope that the members would have the opportunity to meet him. Dr. C. W. Kollock suggested that it would be well for the Society to make some arrangement to entertain the Doctor during his stay in Charleston, and suggested that this might be arranged for at a later date.

The regular order of business having been completed, the President stated that the special order of business which had been arranged for would now be taken up, and requested that the Secretary read the resolution of the General Staff, transmitted by the Board of Commissioners to the Society at its last meeting. The Secretary then read the following resolution:

"Resolved that the Board of Commissions be requested to reqest the Medical Society of South Carolina to limit the privileges of the Hospital to members of the Society in good standing."

After some discussion, in which Drs. R. S. Cathcart, A. J. Buist, F. B. Johnson, and others took part, the following resolution, introduced by Dr. Cathcart, was seconded and carried:

Resolved that the privileges of the Roper Hospital be extended to those of the medical profession who have made application therefor and have been approved by the Board of Censors of the Medical Society of South Carolina. It is understood that this does not refer to those members of the profession who have enjoyed the privileges of the Hospital for twenty years or more, and those who are at present in good standing in the said Society.

The Scientific Program was called at 9:00 P. M. This consisted of a series of surgical case reports.

Dr. A. E. Baker reported a case of peno-scrotal hypospadias, on which several operations had been performed with a view of the construction of a new organ. He exhibited the patient, a boy of fifteen, which showed the success of these multiple operations. Dr. Rutledge, Dr. Buist and Dr. O'Driscoll discussed the case, making further suggestions as to the best methods of achieving a final result. Dr. Baker closed the discussion.

Dr. T. E. Bowers reported a case of gunshot wound of the spine, in which the bullet had penetrated the twelfth dorsal vertebra and dropped down into the spinal canal, being removed at the fourth lumbar vertebra. He exhibited the patient and demonstrated the paralysis resulting from injury to the cauda equina, stating that after removal of the foreign body the paralysis had improved nearly one hundred per cent. Dr. Bowers requested that Dr. O'Driscoll outline the anatomical and physiological effect of the injury to this portion of the spinal cord. Dr. O'Driscoll carried out this request in a masterful way. Dr. Palmer showed an X-ray film giving the location of the bullet. The paper was further discussed by Dr. Prioleau. Dr. Bowers closing.

Dr. W. H. Prioleau reported a case of purulent appendicitis on which he had done an interostomy. This patient developed pneumonia, following which he had another pelvic abscess. In operating for this latter condition, he was able to see the result of the interostomy, which showed that the intestine did not remain adherent to the abdominal wall, but was held there by a stringlike band in which there was an opening communicating with the external air. Dr. Prioleau exhibited the case, and also discussed the value of interostomy in acute peritonitis.

At the conclusion of this report, Dr. J. P. Palmer was requested by the President to come forward and sign the constitution.

There being no further business, the meeting adjourned.

W. Atmar Smith, M. D., Secretary.

REGULAR MONTHLY MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY, HELD AT LIBRARY HALL, CITY LIBRARY BLDG., JULY 1, 1929.

In the absence of the President, the meeting was called to order by a Past President of the Society, Dr. Curran B. Earle at 8:30 P. M. with about 30 members and guests present.

The minutes of the last meeting were read and approved as read.

Dr. Earle then called upon Dr. Frank E. Kitchen (D. V. M.) who presented an excellent paper on "Brucella Abortus Infections". The speaker first stated that the organism produces a virulent infection of the uterine mucous membrane and the foetal membranes of the cow and foetus. The economic loss from Br. Abortus infection is approximated by experts at $100,000,000 a year. Dr. Abortus is identical with Dr. Mellitensis in morphology and cultivation and differentiation is accomplished by the agglutination tests.

Channels of infection: 1. Digestive tract. 2. Through the skin. 3. Copulation. 4. Artificial. The organism has a predilection for embryonic tissue, and the non-gravid cow's uterus is not readily infected although the organisms may remain latent there until conception. Dr. Kitchen then outlined the pathology of the disease in cattle. The infection occurs from 3-5 times and then the animal apparently develops immunity of varying degrees. The infection, although the cattle may go to term, produces a great diminution in the milk supply.

Dr. Kitchen then stated that there have been 10,000 cases in Southern France since 1920. It

was formerly thought that the organism may be transmitted to humans by imported cheeses, but it has been shown that this is not likely except in the case of fresh cheeses.

Man may become infected by abrasions on the skin or on the mucous membranes by coming in contact with infected animals.

It has also been shown that 30% of the milk (raw) on the Chicago market is infected with Br. Abortus.

Dr. Kitchen then assured us that the disease is not more common, but, as in the case with many other diseases, we are able to recognize it better. In the case of humans, where the Widal test is negative, it was suggested that agglutination tests for Br. Abortus be done in all cases. These infections may be often traced to infected dairy farms and to people who have been associated in some way to the animal industries relating to the handling of cattle or swine.

The following reasons were offered in the attempt to explain why there are not epidemics of the disease among human beings:

1. Man enjoys a fairly good natural immunity. 2. Human resistance against it is often good. 3. There may be few strains that are really virulent against man. 4. The swine type of Br. Abortus seems to be the strain most commonly isolated from the human body, and relatively few people come in contact with these animals as compared to cattle, moreover, our contact with these animals is not so close as with cattle. The swine type seems to predominate in the State of Iowa.

Br. Abortus infections have been observed in slaughterhouse workers, and have also been traced to the handling of aborting sows, at which time the organism is supposed to have entered through abrasions in the human skin.

This undulant type of fever seems to be more common to rural communities where the pasteurization of milk is not resorted to, also in small communities.

Dr. Kitchen then discussed the significance of cattle who reacted to the Br. Abortus tests stating that there is much conflicting evidence in the conclusions deduced from these tests.

Virulent strains of the organism are difficult to cultivate as CO_2 gas is necessary to their cultivation.

The control of the infection depends upon the following factors: 1. Co-operation between the Veterinary and Medical Professions. 2. Pasteurization of milk and, 3. More complete knowledge of the disease.

Discussed by Drs. J. M. Fewell, Davis who moved that the paper be published in the State Medical Journal, seconded by Dr. J. M. Fewell and carried. The discussion was continued by Drs. Earle, Tyler, Carpenter; closed by Dr. Kitchen.

Dr. Willard C. Hearin was then called upon who presented a very revealing paper on "Indications for, and Methods of Choice of Caesarian Section". This operation has been performed to, our definite knowledge since 1620; the mortality has markedly improved during the past 50 years. The mortality, in the hands of skilled operators is 2-4% for the classical type of the operation and less than 1% for the low type of operation.

Indications for the operation:

Indications are classified as absolute and relative, for the three types of Caesarian Section, the Polow, Classical and Cervical. The indications, relative and absolute as outlined by Dr. Hearin were myoma, osteomalacia, haemorrhage, uterine rupture, malignancy, presence of a virulent infection, in which the Polow type was to be resorted to. Indications for Classical type: contracted pelvis, large child, stenosis of the vaginal tract, prolapse of uterus, aged primipara: relative indications—eclampsia, ante-fixed uterus, fibromata, heart disease, pulmonary oedema, etc.

Indications for low section is simply a method of choice in preference to the Classical Type and should be restored to where skilled operators are available.

The Classical Type is the easiest method and most rapid, but has the disadvantage of predisposing more to infection. Incidence of uterine rupture in subsequent labors is higher. The low section is less apt to cause shock, and the incidence of uterine rupture is less likely to occur.

Dr. Hearin then mentioned some of the most important indications for a series of 31 cases worked up by himself, namely:

1. Eclampsia. 2. Slightly dilated cervix. 3. Contracted pelvis. 4. Cervical stenosis. 5. Double cervix in patients seen too late. 6. Congenital heart disease. 7. Decompensated heart and large foetus. 8. Scar tissue in vaginal canal. 9. For the purpose of sterilization.

Dr. Hearin strongly advocated local anaesthesia for these operations and stated that 23 of this series had been done under local. Discussed by Drs. Guess, Curran B. Earle, C. O. Bates; closed by Dr. Hearin.

Detailed clinical case report: Dr. L. O. Mauldin.

This was a case of Mikulicz's disease (chronic enlargement of the salivary glands). The patient was 56 years old and had severe distress about the mouth; there had been a previous attack of a milder nature 6 months previous to the time Dr. Mauldin saw him. A diagnosis of cancer of the throat had been made. Examination revealed no pathology in the throat at all, but there was a purulent discharge on the right

of the tongue also from Wharton's Duct; further examination revealed a very large abscess the cause of which was a fairly large stone in the duct. After removal of the stone, the patient was given an alkaline mouth-wash; recovery was rapid.

Dr. T. M. Davis then exhibited some new surgical instruments of his own invention.

Under the heading of new business, Dr. Davis complained of the great delay of building the new Tuberculosis Sanitorium. Dr. C. O. Bates moved that the Secretary write the members of the Greenville County Delegation requesting that this body make an effort to secure the money with which to start the build of the Sanitorium; seconded and carried.

Dr. Tyler reported that the Committee on License Fees was in the act of securing information from various City Clerks, and that the Committee would probably report back to the Society at its next meeting.

The Secretary then read a letter from Mrs. A. F. McKissick requesting the Society to assist in the examination of Veterans for Government hospitalization; this letter had been addressed to Dr. Curran B. Earle. Dr. Earle moved that the President of the Society, Dr. W. H. Powe and the Secretary arrange for a meeting with Mrs. McKissick regarding this matter; seconded and carried.

The following new members were unanimously elected to membership in the Society; Drs. J. M. Brice, J. W. Jervey, Jr., and John E. Davis.

Dr. Walter Bates suggested that the Society give a fish supper at the August meeting at which time representatives of the Southern Paediatric Seminar would be the guests of the Society. Dr. Tyler moved that the President of the Society, Dr. Walter Bates, and the Secretary meet at some near future date and plan this meeting; seconded and carried.

There being no further business, the meeting adjourned.

I. S. Barksdale, M. D., Secretary.

-:- NEWS ITEMS -:-

IODINE CONFERENCE

June 21, 1929

Dr. E. A. Hines,
Seneca, S. C.
Dear Dr. Hines:

We deeply regret that you could not attend the meeting in Columbia yesterday. It was fine. The attendance was excellent and the men all seemed interested in the iodine subject and expressed their desire to help in such ways as they could, not only in stressing the use of our own vegetables by our own people, but also to lend such assistance as opportunity will offer to aid the matter in a commercial way.

I am sendnig you a transcript of the proceedings, the resolution formally adopted, and a list of those invited.

I presume that you prefer to use such of this material as you would like in an editorial rather than as a reportorial.

With kind personal regards, I am

Sincerely yours,

F. H. McLeod, M. D.

The South Carolina Commission of Natural Resources requested Dr. F. H. McLeod to directly interest the doctors of the state in the high iodine content of our home grown good products. This was done by the appointment of a representative of every county in the state, who was requested to attend a meeting in Columbia at the Jefferson Hotel on June 20th.

This meeting was well attended, about thirty doctors being present. The situation was discussed by Dr. Weston, Dr. Remington, Dr. Cathcart, Dr. Shaw and many others, and it was evident that there was no lacking in interest in the matter.

The following resolution was unanimously passed: (Exhibit A.)

The Commission of Natural Resources was requested to prepare suitable slides for moving picture houses presenting briefly the iodine subject, and it was suggested that the county demonstration men and women, and all other such agencies be requested to make the education of the people as to the value of our home grown food products, be an important part of their activities.

The following were appointed as chairmen of medical affairs for their respective counties (Exhibit B) and were requested to see that the proposition is presented to every possible agency in their counties.

Exhibit A

WHEREAS the Laboratory of the South Carolina Research Commission has demonstrated by careful analyses, and these analyses confirmed by other high chemical authorities, the high mineral content, and especially iodine in the fruits and vegetables grown in South Carolina.,

We THEREFORE recommend that the peo-

ple of South Carolina eat their own products, it having been demonstrated that they contain all the requirements of nutrition.

We futhermore recommend that our physicians urge upon their patients the importance of preventing nutritional deficiency diseases by the consumption of their own products, it having been demonstrated that they are of exceptional value.

We recommend that this be brought immediately before each county medical society, and all physicians of the State, and medical organizations in the United States, and other health agencies, by the journal of the South Carolina Medical Association, the State Board of Health, the press, and the individual members of this conference.

Exhibit B

Abbeville—Dr. G. A. Neuffer, Abbeville.
Charleston—Dr. Robt. S. Cathcart, Charleston.
Aiken—Dr. Hastings Wyman, Jr., Aiken.
Allendale—Dr. Jno. L. Folk, Fairfax.
Anderson—Dr. J. R. Young, Anderson.
Georgetown—Dr. Olin Sawyer, Georgetown.
Spartanburg—Dr. D. Lesesne Smith, Dr. W. B. Lyles, Spartanburg.
Colleton—Dr. Riddick Ackerman, Walterboro.
Horry—Dr. H. L. Scarborough, Conway.
Richland—Dr. Geo. H. Bunch, Dr. F. M. Routh, Columbia.
Bamberg—Dr. J. S. Matthews, Denmark.
Barnwell— _____, Barnwell.
Lexington—Dr. D. M. Crosson, Leesville.
Beaufort—Dr. M. G. Elliott, Beaufort.
Marlboro—Dr. C. R. May, Bennettsville.
Kershaw—Dr. Jno. W. Corbett, Camden.
Lee—Dr. S. B. DuBose, Bishopville.
Cherokee—Dr. A. L. Little, Blacksburg.
Berkeley—Dr. Wm. K. Fishburne, Pinopolis.
Orangeburg—Dr. C. A. Mobley, Orangeburg.
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BOOK REVIEWS

THE COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION FOR 1928, Volume XX. Edited by Mrs. M. H. Mellish, Richard M. Hewitt, M. D., and Mildred A. Felker, B. S. Octavo volume of 1197 pages with 288 illustrations. Philadelphia and London: W. B. Saunders Company, 1929. Cloth, $13.00 Net.

THE NOSE, THROAT and EAR and their DISEASES—In original Contributions by American and European Authors. Edited by Chevalier Jackson, M. D., Professor of Bronchoscopy and Esophagoscopy in the University of Pennsylvania, in the Jefferson Medical College, and in the Graduate School, University of Pennsylvania, and George M. Coates, M. D., Professor of Otology, Graduate School, University of Pennsylvania. Assisted by Chevalier L. Jackson, M. D., Assistant in Bronchoscopy and Esophagoscopy, University of Pennsylvania. Octavo volume of 1177 pages with 657 illustrations and 27 inserts in colors. Philadelphia and London: W. B. Saunders Company, 1929. Cloth, $13.00 Net..

CHEMISTRY IN MEDICINE—A Cooperative Treatise Intended to Give Examples of Progress Made in Medicine With the Aid of Chemistry. Edited by Julius Stieglitz, Professor of Chemistry, University of Chicago. Advisory Editors: Anton J. Carlson, Professor of Physiology, University of Chicago; Reid Hunt, Professor of Pharmacology, Harvard Medical School; Frank R. Lillie, Professor of Zoology, University of Chicago; LaFayette B. Mendel, Professor of Physiological Chemistry, Yale University; H. Gideon Wells, Professor of Pathology, University of Chicago. The Chemical Foundation, Inc., 85 Beaver Street, New York, N. Y.

CLINICAL ELECTROCARDIOGRAMS — Their Interpretation and Significance by Frederick A. Willius, M. D. Section on Cardiology, The Mayo Clinic, Rochester, Minnesota and Associate Professor of Medicine, The Mayo Foundation, University of Minnesota. Quarto of 219 pages with 368 illustrations. Philadelphia and London: W. B. Saunders Company, 1929. Cloth, $8.00.

PHYSICAL THERAPEUTIC TECHNIC — By Frank Butler Granger, M. D., Late Physician-in-Chief, Department of Physical Therapeutics, Boston City Hospital; Director of Physiotherapy, United States Army; Medical Counselor, United States Veterans Bureau; Member of Council of Physical Therapy, American Medical Association; Instructor of Physical Therapeutics, Harvard Medical School; Assistant Professor of Physical Therapy, Tufts Medical School. With a Foreword by William D. McFee, M. D., Boston, Mass. Octavo volume of 417 pages with 135 illustrations. Philadelphia and London: W. B. Sanders Company, 1929. Cloth, $6.50 Net.

THE NEUROSES—By Israel S. Wechsler, M. D., Associate Professor of Clinical Neurology, Columbia University, New York City. Octavo of 330 pages. Philadelphia and London: W. B. Saunders Company, 1929. Cloth $4.00 net.

DISEASES of the NOSE, THROAT and EAR (Sixth Edition)—A Manual of Diseases of the Nose, Throat and Ear. By E. B. Gleason, M. D., LL.D., Professor of Otology, Graduate School of the University of Pennsylvania. Sixth Edition, Thoroughly Revised. 12mo of 617 pages with 262 illustrations. Philadelphia and London: W. B. Saunders Company, 1929. Cloth $4.50 net.

SURGICAL PATHOLOGY—By William Boyd, M. D., Professor of Pathology, University of Manitoba, Winnipeg, Canada. Second Edition, Revised and Reset. Octavo of 933 pages, with 474 illustrations and 15 colored plates. Philadelphia and London: W. B. Saunders Company, March, 1929. Cloth, $11.00 net.

THE SURGICAL CLINICS OF NORTH AMERICA—(Issued serially, one number every other month.) Volume 9, number 2. (Chicago Number—April, 1929) 243 pages with 70 illustrations. Per Clinic year (February, 1929 to December, 1929). Paper, $12.00; Cloth, $16.00. Philadelphia and London: W. B. Saunders Company.

THE PHYSIOLOGY OF LOVE—By George M. Katsainos, Ph.D., M. D. Privately Printed at Boston, Massachusetts, U. S. A.

The Journal

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EDITORIAL

PLANS FOR FLORENCE MEETING, 1930, UNDER WAY. PRESIDENT ELECT A. M. A. ACCEPTS INVITATION

Before the gavel fell closing the meeting of the Association at Charleston a conference of the President Elect, Dr. C. R. May and the other Officers of the Association, was held and tentative plans for the next meeting discussed. For one thing, the Scientific Committee was appointed and entered upon its work. The following is the personnel of this Committee:

Dr. Hugh Smith, Greenville, Chairman.

Dr. James McLeod, Florence, S. C.

Dr. W. R. Mead, Florence, S. C.

Dr. C. R. May, President, Member Ex-Officio.

Dr. E. A. Hines, Secretary, Member Ex-Officio.

It is with the greatest interest in connection with the program for our next meeting that we are permitted to announce in this issue the acceptance of our invitation by Dr. William Guerry Morgan of Washington, D. C., President Elect of the American Medical Association to appear in an address on our program at Florence. Dr. Morgan is one of the outstanding internists of America. He has been Professor of Gastro-Enterology at Georgetown University Medical School for many years. He has been one of the most prominent officials of the American College of Physicians and has held office in numerous other National Societies. Dr. Morgan is one of the most lovable physicians in the United States. Few men have ever been elected President of the American Association without opposition as was the case at the Portland meeting when Dr. Morgan received this extraordinary honor. Dr. Morgan has a multitude of friends in the South, many of them members of our Association. He will add tremendously by his learning and charming personality to the attractiveness of the program next year. With such a start as this every

member of the Association may feel that no stone will be left unturned to provide a program broad in scope and of keen interest to every-one concerned.

DEATH OF DR. J. E. WARNOCK

The news of the death of Dr. J. E. Warnock of Allendale, the able Councilor of the Eighth District of the South Carolina Medical Association has caused deep sorrow to his many friends throughout the State. Dr. Warnock had been an officer of the State Association for but a brief period, yet he had impressed the membership with his sincerity of purpose, his great interest in organized medicine and his desire to be helpful to the immediate section of the State in which he lived. Dr. Warnock was in the prime of life. He was active in many organizations. His funeral was one of the largest ever held in the city in which he lived, being attended by large numbers of people from neighboring towns, thus giving evidence of his popularity. Dr. Warnock will be greatly missed in the councils of the South Carolina Medical Association.

DR. WILLIAM WESTON HONORED AT THE A. M. A.

The following letter appeared in the Bulletin of the Fulton County Medical Society, Atlanta, Ga., August 15, and was written by one of the distinguished delegates from the Georgia Medical Association:

One of the outstanding features at the Meeting of the American Medical Association at Portland, Oregon, was the exhibt of the State of South Carolina under the management of Dr. Wm. Weston of Columbia. We look upon this as one of the greatest movements that has been made in recent years by any State in the Union.

Under the advisement of Dr. Weston, the State several years ago began the chemical study of foods, and many surprises have developed. Special attention has been given by Dr. Weston to the mineral content of the various foods grown in his State. He has found that the mineral content of their foods does not simply exceed the quantity of iron, manganese, copper and iodine of vegetables grown in the middle and far West but in many instances exceeds it in multiples of hundreds. Scientists are all recognizing this fact, and Dr. Weston told me that the farmers could not supply the demand for their vegetables.

Georgia's sister State is setting an example for her which she certainly should follow. The greater portion of Georgia is in the coastal plains and a very similar soil to that of South Carolina. Just the work under the directorate of this one man is producing an asset for the State of South Carolina that is inestimable. It will ultimately amount to not millions but billions of dollars. If our Legislature would awaken to this important movement it would render a service to this State greater probably than anything else that might be considered.

Goiter and other diseases are being produced by feeding foods obtained elsewhere and promptly cured by feeding the South Carolina products and vice versa. The Medical profession of Georgia should awaken to this important movement and arouse the business interests of this State to take up similar activities.

E. C. Thrash, M. D.

NOTE: In addition to the above recognition Dr. Weston was elected Chairman of the Section on Diseases of Children.—Ed.

LETTER FROM MEDICAL ASSOCIATION OF GEORGIA ABOUT MEETING AT MIAMI, FLORIDA, OF THE SOUTHERN MEDICAL ASSOCIATION

Dr. E. A. Hines,
Secretary,
Seneca, S. C.

My dear Dr. Hines:

The members of the Medical Association of Georgia are planning a President's tour to the Southern Medical Association at Miami, Florida, November 20th to the 22nd. We would leave Savannah on the morning of the 18th and expect to reach Miami the following afternoon.

We are writing early to extend to you an invitation to join this mortorcade and also to extend to the profession of South Carolina through you, an invitation to join us. We

trust that we shall be able to have a large representation from the profession of your state.

I am writing a long time in advance so that you may publish this information in the Journal of your Association and advise us later how many cars will make the trip.

With kind personal regards,

I am,

Sincerely,
Wm. R. Dancy, M. D.,
President, Medical Association of Ga.

Dr. E. A. Hines,
Secretary,
South Carolina Medical Association,
Seneca, S. C.

My dear Dr. Hines:

I am in receipt of your delightful letter of August 13th and I am pleased to know that you will publish the invitation of the Medical Association of Georgia for the President's tour to Miami in the next Journal of your Association. I appreciate that this means the presence of quite a few cars from your good state. I would be very glad if you would keep me advised relative to this matter. I think it would be well to mention in your Journal that those expecting to make the tour with us should notify you as soon as possible, giving the name and type of car and size of tires so that our repair cars can carry the necessary materials. The membership in Savannah and Atlanta of our Association are quite enthusiastic over the trip. As we reach cities of interest we expect to tour through them under the guidance of a local physician. As to insignia on the cars anyone may decorate his car as he sees fit. We shall probably have a poster for the windshield.

I enclose tentative schedule in this letter.

With best regards,

I am,

Sincerely,
Wm. R. Dancy, M. D.,
President, Medical Association of Ga.

SCHEDULE FOR THE PRESIDENT'S TOUR FROM SAVANNAH, GA., TO MIAMI, FLA.

MILES:	
	Lv. Savannah—7:00 A. M.
84	Ar. Brunswick—9:30 A. M.
	Stop in Brunswick, for incidentals, one half hour.
	Lv. Brunswick—10:00 A. M.
70	Ar. Jacksonville—12:00 P. M.
	Stop in Jacksonville one hour for lunch.
	Lv. Jacksonville—1:00 P. M.
41	Ar. St. Augustine—2:15 P. M.
	Lv. St. Augustine—2:45 P. M.
31	Ar. Bunnell—3:45 P. M.
26	Ar. Daytona Beach—4:30 P. M.
	Spend night at Daytona Beach.
	SECOND DAY:
	Lv. Daytona Beach—8:00 A. M.
15	Ar. New Smyrna—8:30 A. M.
51	Ar. Cocoa—10:00 A. M.
22	Ar. Melbourn 10:45 A. M.
48	Ar. Ft. Pierce—12:00 P. M.
	Half an hour for incidentals
	Lv. Ft. Pierce—12:30 P. M.
59	Ar. West Palm Beach—2:00 P. M.
	One hour for lunch.
	Lv. West Palm Beach—3:00 P. M.
43	Ar. Fort Launderdale—4:30 P. M.
23	Ar. Miami—5:15 P. M.
513	

PRESIDENT'S PAGE

By C. R. May, M. D., President South Carolina Medical Association

It is highly essential that the South Carolina Medical Association have a large number of its members attend the next meeting of the Southern Medical Association at Miami in November. I would like to see at least two hundred and fifty attend, and hope that by planning early and making some sacrifices if necessary, we can have a large attendance at this important meeting.

We should all go labeled with the Iodine Label of the South Carolina Natural Resources Commission on our coats and be able to answer all inquiries concerning this newly discovered resource, as it is by far the most important discovery and the most vital fact that has been placed before our people.

The high iodine content of South Carolina grown vegetables is astounding and gratifying to millions of goitre sufferers; to whom it means satisfaction and relief from one of the most intractable of conditions. They are so interested that they are going to call on South Carolina to produce enough vegetables to help them with the goitre situation. The doctors of the goiter belt not only recognize and approve our find, but stress the crying need of those afflicted and the necessity of obtaining enough of the foodstuffs so rich in iodine. How to get the cooperation of the whole state and work out plans as to how best to handle this valuable resource to the mutual advantage of the goitre sufferers and the agricultural interests of the state will require much study and understanding of the prevailing conditions in each county. Since this research work and the facts brought out have been originated by two of our distinguished physicians and their co-workers, we should back up the work they are doing and try and aid them in every way possible for the good of humanity and our own State. The whole world have their eyes on South Carolina and her marvelous discovery, it is up to us to give them the facts.

So once more I ask that we study this important situation and let us have a crowd of South Carolina Physicians at the Miami meeting in November.

ORIGINAL ARTICLES

*CONTROLLABLE SPINAL ANESTHESIA

By A. F. Burnside, M. D., Columbia, S. C.

For some years, Dr. Bunch and I have been interested in spinal anesthesia but felt that it was not a safe procedure, especially in the type of patient in whom ether was contraindicated. It was not until the latter part of 1928 that we began to use spinal anesthesia to any extent.

In many cases needing surgical treatment, the choice of anesthesia is of vast importance. Since the time of Hippocrates there has been and exists an unwritten or implied law between the patient and the physician or surgeon, that it is the duty of the physician to avail himself of every possible means within mortal power to preserve the life of the patient. If the professional attendant is conscientious and feels that his professional skill is wanting in any particular line, he considers a specialist or refers the case to one more experienced in that particular branch of the profession. He considers what is best for the patient and acts accordingly, but does the profession, particularly the surgical profession, act in the same manner regarding anthesia? Probably not, and I think we are safe in saying that generally there is little, if any, consideration given by the surgeon to the type of anesthetic that is going to be used. Not infrequently it is left to the anesthetist, who is occasionally a nurse, and the results are in direct ratio to the experience and ability of the anesthetist. To administer inhalation anesthesia to patients suffering with diabetes, nephritis, alcolholism, drug addictions, decompensated hearts, hypertension, arteriosclerosis, eclampsia, pernicious vomiting, anemias, (primary, secondary or pernicious), strangulated hernia, intussusception, volvulus, general peritonitis, local or pelvic peritonitis, shock, emaciation, obesity, bronchitis, pleurisy, tuberculosis, phryngeal or tracheal obstruction, one is not adhering to the unwritten law, but is, in fact, doing harm to the patient and contributing to the hospital's mortality list. All of the above patients do much better with spinal anesthesia.

The real mortality from inhalation anesthesia is not at the time of the operation, but is secondary, from one hour to one week following induction. The secondary mortality is 95% of the whole, as compared with 5% of primary mortality. How many surgeons can say that they have had one hundred, or even fifty, successive cases without some of the postoperative complications of inhalation anesthesia, such as postoperative shock, distention, ileus, lung abscess, acidosis, acute dilatation of the stomach, albuminuria, suppression, bronchitis, pneumonia, or the flare-up of an arrested tuberculosis?

The primary mortality of spinal anesthesia is no greater, and is probably less, than that of inhalation anesthesia; secondary mortality, as it is administered at the present time, is nil.

Since the latter part of 1928, we have given 186 patients spinal analgesia, using the Pitkin technique entirely. His solution is called spinocain and contains 0.0022 gm. strychnine sulphate, 0.195 gm. novocain, 0.13 gm. starch paste, 0.324 gm. alcohol and normal saline q. s to two c.c. in each ampule. The patient is prepared in the usual manner before coming to the operating room. One hour before operation the patient is given one H. M. C. No. 2 hypodermically and an half hour later morphine sulphate grains 1/8. For spinal puncture, the patient is put on his side with knees flexed, head bent toward knees and back bowed out. The entire lumbar, part of the dorsal, and sacral regions are painted with iodine and the field draped with sterile towels. About 20 minimums of a 1% novocain and 5% ephedrin solution is injected into the skin between the spinous processes where the lumbar puncture is to be made. This solution is used to anesthetize the area for spinal tap and to prevent a fall in the blood pressure. A 22 guage rustless spinal puncture needle with the point ground off to an angle of 45° is used. It is

*Read before the South Carolina Medical Association, Charleston, S. C., May 9, 1929.

important that the needle be inserted through the interspinal ligament at a right angle to the long axis of the spine and not diverted to right or left. When the needle goes through the dura there is a snap and a sensation of lack of resistance which leads one to believe that the canal has been entered. The stylet is withdrawn from the needle and spinal fluid flows out. When anesthesia of the perineal region is desired, only 1 c. c. of spinocain is required. Attach the syringe containing 1 c. c. of spinocain to the spinal puncture needle, aspirate one or two drops of spinal fluid to reassure yourself that the needle has not been misplaced, then inject the contents of the syringe, remove the needle immediately place the patient in a 15° to 18° Trendelenburg position.

If anesthesia is to be confined to the legs, 2 c. c. of spinocain is used. Aspirate 1 c. c. of spinal fluid into the syringe containing the anesthetic solution and then inject one-half of the contents. Again aspirate 1 c. c. of spinal fluid and inject the contents of the syringe. The table is now placed in a 10° to 15° Trendelenburg position.

For anesthesia to the umbilicus, 2 c. c. of spinocain is sufficient for short operations. For prolonged operations 3 to 4 c. c. should be employed in ratio to the anticipated length of the operation. Four c. c. will cause the anesthesia to last about two hours. Into a 5 or 10 c. c. syringe aspirate 1 c. c. spinal fluid. Inject one-half of contents. Again aspirate 2 c. c. of spinal fluid and inject the contents of the syringe, placing the patient in a 7° to 10° Trendelenburg position.

To extend the anesthesia to the costal margin, draw up 4 c. c. of spinocacin into a 5 or 10 c. c. syringe, aspirate 1 c. c. spinal fluid, inject one-half of the contents; again aspirate 2 c. c. spinal fluid, inject one-half the contents of the syringe and repeat this once again to make a total expansion of 8 c. c.; then inject the contents. Then place the patient in a 5° Trendelenburg position.

In our series of 186 cases using the above method, we have had three deaths, only one of which I am sure could possibly be attributed to the anesthetic. One case was a man 57 years old, who had been bleeding for several months from a gastric ulcer. He was transfused twice before operation. The spinal anesthetic wore off before the operation was completed and it had to be supplemented with ether. He died on the sixth day after operation from pneumonia.

The second case was a man sixty-eight years old with a large perforating gastric ulcer. About one-half of his stomach was removed, an anterior gastroenterostomy and an interior enterostomy was done. He reacted nicely, but died suddenly seventeen hours after the operation. We were unable to get an autopsy.

The third case was a woman thirty-four years old with an advanced pulmonary tuberculosis. She had a history and physical finding of a very acute appendicitis. At operation we found many large perforating tubercular ulcers of the ilium. She died on the fourth day after operation from a general peritonitis which was verified at autopsy by the pathologist.

In most of the patients in this series of cases there was a definite contraindication for inhalation anesthesia, such as acute colds, bronchitis, hypertension and arteriosclerosis, nephritis, diabetes and tuberculosis. We have had only three cases in which any complications could possibly be ascribed to the anesthetic, one of which was unable to void for five days following a hemorrhoidectomy. Another was unable to void for seven days following a bilateral inguinal herniotomy. The third was an old man who came into the hospital with hiccaughs, a blood pressure of 200/90, arteriosclerosis with an appendix abscess. His appendix was removed and abdomen drained. He had an uneventful recovery except for an incontinet bowel for five days.

In most of our cases the blood pressure has not fallen below the normal level. In a few, it has dropped as low as 70 systolic and one case dropped to 50 systolic. In a few cases it has risen.

We have had only one patient to complain of headache in this series. A blood smear revealed that she had malaria and quinine relieved her.

I am sure that in this series of cases we have saved a number of lives we could not have saved if it were not for spinal anesthesia. We have been able to do better and neater

work due to the fact that the abdominal muscles are much more relaxed and the intestines are contracted. It does not take one-third of the packing off in the abdomen as it does with inhalation anesthesia, hence less trauma, less postoperative adhesions. The psychic effect of spinal anesthetic is good. The patient's convalesence is shorter and more comfortable, due to the fact that there is practically no vomiting, dehydration, ileus or distention.

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DISCUSSION

Dr. Samuel Orr Black, Spartanburg: When one speaks of bronchoscopy, one thinks of Chevalier Jackson; when one speaks of gall-bladder or colonic surgery, one thinks of the peerless

W. J. Mayo; and when one hears of speaks of spinal anesthesia one's mind automatically turns to Wayne Babcock of Philadelphia. He has used it more frequently and over a longer period of time and has done more to popularize it than any other man.

Three years ago we decided to give spinal anesthesia a thorough trial. After using it cautiously and selectively in some twenty-five or thirty different patients and being more or less pleased with it, I visited Babcock to obtain at first hand his technic, as well as the merits and limitations of the anesthetic itself.

Intradural is not a true cord anesthesia but is a root anesthesia, due to the action of the anesthetic agent on the anterior and posterior spinal nerve roots. It interrupts the conduction in the roots exposed to the drug in proportion to the degree in which the root and the drug contact one with the other. It is unsafe and impracticable for operations above the diaphragm. This, of course, is due to its action on the important nerve centers. Until a drug is found which has a selective action for the posterior roots, it will continue to be contraindicated for surgery of he head, jaw, neck, breast, or thorax. The higher one goes up toward the twelfth dorsal vertebra with the injection, the more profound the reaction. It has no appreciable action on the liver on kidneys or lungs. It can with safety be used in diabetes, acute and chronic bronchitis, acute and chronic tuberculosis, nephritis, cardiac hypertrophy, hypertension, and other organic diseases.

It contracts the intestine, stimulates peristalsis, relaxes the sphincter ani, and often empties the lower bowel before the patient is returned to bed.

There is no anesthetic with which I am familiar that gives such relaxation. It is almost instantaneous. As soon as the incision is made, the walls collapse or fall apart, active peristalsis is plainly visible, and manipulations can be easily performed, often without need of a retractor. Occasionally there is a transient nausea or retching, which is usually controllable by oxygen or ammonia. The drop in blood pressure we control by subcutaneous injection of adrenalized saline just after the subrachnoid induction.

It is not a good anesthetic in neurotic individuals unless they are thoroughly narcotized by morphine or other sedative or kept in a state of subconscious quiet by nitrous oxid.

We do not use it in the presence of spinal lues, pleural or pericardial effusion, myocardial degeneration, or in cases of extreme obesity. We use it more and more in small individuals with low blood pressure.

There is an element of danger in it. This element is known and understood and is easily combatable. There is more danger in the user than in the anesthetic. It requires patience, study, and experience in its use before it is safe in an operator's hand.

There is considerable objection to it by certain members of the profession. The laity have been educated to gas and to ether, but not to spinal anesthesia. Babcock has pointed out that in a hostile community it had best be used at first very cautiously. In our hands, headache is rare and nausea and vomiting are less than with general anesthesia. There have been no spinal or cord lesions and no palsies or permanent anesthesia.

I listened with pleasure to the very excellent paper of Dr. Burnside. He has discussed in a practical way the indications and contraindications, as well as the technic itself and the results of his experience with this anesthesia.

In closing I would say that in my judgment spinal anesthesia in its field (i. e., in cases in which it is not contraindicated), and in the hands of one who has been thoroughly grounded in its technic, one who knows and understands and is interested in it, is the safest, the quickest, and the most relaxing anesthetic which we have.

Dr. J. H. Young, Columbia: Anesthesia is something I have not made any close study of, especially spinal anesthesia; but Dr. Burnside has called me on several occasions to sit by the patient while he is operating, after he has given a spinal anesthetic; and my impression is that spinal anesthesia certainly has its place. It is a good thing, and it is a thing that can not be replaced where it is indiated. I was struck with the absolute relaxation of the patient, the comfort of the patient, and the convenience which the surgeon has. I am really a little more partial to spinal anesthesia, I guess, than the average doctor who has not been using it at all, because I have been associated with Dr. Burnside on several cases and I have been very forcibly struck with the thing as a whole and the way the patients recover after they get back to their rooms. I feel that spinal anesthesia is an anesthesia for cases where ether or some other form of anesthesia generally used can not be given without a great deal of risk. Lung conditions, of course, are one such class of cases, and kidney conditions, also cardio-renal-vascular diseases; and I put in there, too, a class where you have a pus pocket in the abdomen. If you are trying to pack off your field with ether, and the anesthetist is trying to go lightly with the anesthetic, and the patient begins to strain, you are apt to soil the abodmen from the pus pocket. There is no straining with the spinal anesthetic, and less packing (less trauma to the intestines) is necessary.

Dr. H. K. Jenkins, Mullins: This spinal anesthesia, or any modification of a local anesthetic, approaches the ideal method of anesthesia. With a general anesthetic you put a patient to sleep, operate on him, put him back to bed in an unconscious condition or semiconscious condition, and you have to keep him on a starvation or semi-starvation diet for several days. That is abnormal, and he has not only the shock of the operation and anesthetic to get over but the starvation. Spinal anesthesia is the more rational method. By its employment the patient is often able to continue his diet without alteration. Of course, surgery is in the limelight, but the method of anesthesia should be emphasized more.

Dr. Burnside, closing the discussion:

I thank the gentlemen for the discussion.

I might say that this spinocain which we are using is lighter than spinal fluid, so you can get the patient in the Trendelenburg position at any time you want. Dr. Pitkin is getting out a new solution which is heavier than spinal fluid, which can be used in obstetrics. The patient can go through the second stage of labor without any pain. I have used the light solution in one obstetric case, and the patient was tickeld to death with it, but it is uncomfortable for the patient to stay in the Trendelenburg position for an hour or so after you give the anesthetic.

Dr. Koster, of Brooklyn, says he has secured complete anestesia from the tip of the toe to the top of the head and has used it in mastoid, tumors of the tongue, and operations on the head.

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*AGRANULOCYTIC ANGINA

Report of a case in a physician

By J. J. Lindsay, M. D., W. P. Coan M. D., Roy P. Finney, M. D., Spartanburg, S. C.

Of the several new clinical entities that have been discovered and described during recent years none is more striking or interesting than agranulocytic angina. It was first recognized by Schulz who published observations on several cases in 1922 and outlined the criteria necessary for diagnosis. Since the publication of this original article only 49 cases have been collected from the literature. Kastlin reported 2 cases and summarized the findings in 43 cases. Stengle and Edward Rose have found six additional cases making a total of 49 in all.

The disease appears to effect females more frequently than males. As regards age incidence most of the reported cases have occurred in middle life

The clinical picture of a typical case is quite clear cut and decisive. Without premonitory or invasive symptoms the onset suddenly occurs with fever, chills or chilly sensations, marked depression and anorexia. Within a few hours there appears an inflammation of the mouth or throat which the majority of cases progresses to necrosis and ulceration. The regional lymph glands may or may not be enlarged and they rarely suppurate. Rhinitis, conjunctivitis, and bronchitis are frequent companions.

But the most bizarre and peculiar, as well as the most characteristic phenomenon is the behavior of the leucocytes. Almost immediately there is a very grave depression of the total count which usually is less than 2000 and may be as low as 500 at the heighth of the disease, and more remarkable still the granulocytes or polymorphonuclear leucocytes are frequently entirely absent. The mononuclear lymphocytes are always relatively and sometimes absolutely increased. Schulz and others have rightly placed much emphasis on this peculiar leucocytic reaction as a diagnostic factor, and indeed it may be said to be pathognomonic.

The disease was fatal in all of Schultz's cases and he goes so far as to stress such a tremination as a diagnostic criterion. However other observers have reported a number of recoveries. Weiss contends that there are a variety of degrees and grades of the disease and that the prognosis is influenced by the usual factors that must be considered in any infection such as the virulence of the organism, the age and physical condition of the patient, etc. He believes that only two criteria characterize the disease as a clinical entity: a clinical criterion—necrotic inflammation of the tonsils, gums, or mucous membrane of the mouth—and a hematologic criterion serious diminution or complete absence of the granulocytic cells. Musser in a recent article heartily subscribes to this view.

The disease runs a short course and death or recovery occurs in the course of a few weeks. A massive terminal pneumonia hastened exitus in many of the reported cases, and severe

*Read by title before The South Carolina Medical Association, Charleston, S. C., May 8, 1929.

liver dysfunction with jaundice has also been noted. If a happier outcome is to occur the granulocytes reappear in the blood and soon attain their normal numbers, the fever subsides by lysis, the oral ulceration heals and the general condition of the patient rapidly improves. It is said that relapse occurs occasionally.

The differential diagnosis offers no difficulty in typical cases. There are atypical and borderline cases that require considerable knowledge of the phenomena of throat infection for correct diagnosis. A somewhat confusing fact is that Vincents organisms are practically always found in the mouths of victims of agranulocytic angina. Apparently they bear no relationship to the disease and are either normal inhabitants or secondary invaders. We feel very strongly that no throat infection should be labeled Vincents simply because the B. fusiformis and spirochetes are found in smears, unless the typical ulceration and necrosis characteristic of the disease is also present. In this connection it is well to recall that J. F. Fisher in 201 cases of the common every day disease pyorrhoea alveolaris found Vincents organisms present in every instance. Vincents angina is said to cause some depression of the leucocyte count and a relative mononucleosis but the blood is never agranulocytic.

In certain splastic anemias caused by bone marrow dyscrasia there is marked leukopenia with relative and absolute diminution of the granulocytes. The same is true in benzol poisoning and in radium and X-ray workers. One of us has seen a case of acute arsenical anemia following the administration of salvarsan that simulated very closely angina agranulocytica. The patient died after two weeks illness, the last leucocyte count being 700 with not a polymorphonuclear in 15 slides. The slides were checked by Dr. Standish McCleary of Baltimore who was of the opinion that the condition was aplastic anemia caused by antiluetic treatment.

It is probable that a number of cases formerly described as aleukemic lymphatic leukmia were in reality what we now know as agranulocytic angina, or at least that the etiological agent is the same. The disease is certainly of an infectious nature. The inflammation, necrosis, ulceration, fever and other symptoms could scarcely be produced by a chemical or biological toxemia, but as yet no organism has been isolated or accused.

Case Report

Dr. J. J. L. white, male, married, aged 63, native of South Carolina, and a physician, was stricken suddenly ill on the morning of Feb. 6, 1929 with chills, fever, sore throat, and pain in the rectum.

His past history related an attack of typhoid fever 30 years ago; appendectomy for acute appendicitis 25 years ago, a mastoidectomy in 1922, and an operation on the maxillary antrum in November, 1927. He recovered from all of these without complications and has been for 35 years a busy practitioner enjoying a fair state of health. He felt as well as usual and performed his usual duties the day before the onset of the present illness. However he has been troubled with a small fistula in ano for a number of years and two days prior to the onset of present illness he noticed that is was somewhat painful. He has not been troubled with frequent sore throat, his appetite has always been normal, and his digestion good.

On examination he was thin, toxic in appearance and appeared to be in considerable pain. His pulse was 105, temperature 102, respiration 20, and blood pressure 135 systolic, 80 diastolic. The scalp was normal, conjunctiva congested, and eyes watery. The throat was diffusely red, but especially was this pronounced in the region of the tonsillar fossae and over the posterior wall of the pharynx. In this location the mucous membrane was swollen and covered with a patchy, scarcely perceptible, grayish exudate. The gums were red and somewhat swollen. There was slight enlargement of the anterior cervical glands. The thyroid appeared normal. The heart, lungs, and abdomen presented nothing of interest, and the external genitalia were normal. Proctoscopy was suggested and emphatically refused in language unbecoming a follower of Aesculapius. He minimized his illness, saying that he had a little sore throat and would be all right in a few days, so that no further examinations were made until February 11, four days after the onset. At this time he had a severe con-

junctivitis affecting both eyes, an intensely red and swollen throat, and an area of necrosis the size of a small coin surrounding the openings of the sublingual ducts. His general condition was distinctly worse, temperature ranging from 101 to 103; marked anorexia, profuse sweats, photophobia, and rectal pain each contributed its mite to his misery. The laboratory findings on this date (Feb. 11) were as follows:

Blood—Hemaglobin 66 (Sahli), red blood cells 4,600,000, leucocytes 1,950. The differential count was polymorphonuclear neutrophiles —0, small mononeuclear leucocytes 87%, large mononuclears 13%. Some doubt was expressed about the accuracy of the count and it was repeated that afternoon at two different laboratories with similar results, not a single granulocyte being found in examining a large number of slides.

Smears from the throat were negative for Vincents organisms, but they were present in smears taken from the gums. A throat culture was negative for diphtheria but a profuse growth of streptococcus was obtained.

The urine was cloudy, sp. g. 1010, albumen 1 plus, sugar negative. There were 8 pus cells to the H. P. field on microscopic examination.

His condition remained practically unchanged until February 16th when he began to improve, though his temperature did not reach normal permanently until February 29th. On February 16th he was moved from his home to the Spartanburg General Hospital, and on February 19th at his insistence the rectal fistula which had caused him considerable pain was opened. After the operation improvement continued, the conjunctivitis disappearing first and being followed in order by the sore throat, and sublingual ulceration. Temperature declined by lysis and was normal on February 29th, three weeks after the onset.

The blood picture was most interesting and we regret that this examination was omitted in the early stages of the disease. The results of the series of counts made during illness are as follows:

February 11th—Polymorphonuclear neutrophiles 0, small mononuclear leucocytes 87, large mononuclears 13. Total count, 1,950.

February 13th—Polymorphonuclear neutrophiles ½, small mononuclear leucocytes 81, large mononuclears 18½. Total count, 3,500.

February 18th—Polymorphonuclear neutrophiles 56, small mononuclear leucocytes 29, large mononuclears 11. Total leucocytes, 6,550.

February 28th—Polymorphonuclears 45½, small mononuclears 27, large mononuclears 18, transitionals 9½. Total count, 6,000.

March 9th—Polymorphonuclears 67, small mononuclears 27½, large mononuclears 5½. Total count, 10,200.

April 25th—Polymorphonuclears 69, small mononuclears 22, large mononuclears 8, eosinophiles 1. Total count, 8,350.

On March 12th he was well enough to leave the hospital and on March 16th he resumed practice. There have been no indications of a relapse, and he has almost entirely regained his former vigor.

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*"REMARKS ON PERSONAL ENDOSCOPY AS AN AID TO THE DIAGNOSIS AND TREATMENT OF DISEASE"

By J. W. Jervey, Jr., M. D., Greenville, S. C.

It was with a great deal of pleasure that I accepted Dr. Herbert's kind invitation to make a few remarks on bronchoscopy. It is with more trepidation that I stand before you at this time, making my first appearance before a medical society. Youth and inexperience will ever take the stand when opportunity arises, therefore, knowing my own ignorance, and conscious of my years, I have the temerity to bring before you for consideration a subject new to some, old to many, and fully understood by very few, peroral endoscopy in its relation to the diagnosis and treatment of disease.

May I say in passing that as yet my experience is extremely limited and that I speak to you about facts gleaned from a three weeks stay at the Chevalier Jackson Clinic, during a part of which time I was fortunate enough to take Dr. Jackson's personal course in bronchoscopy and esophagoscopy, and from reading all or nearly all of the literature that has been sent out from there in recent years.

It is a remarkable fact, and one that is not

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*Read before the Buncombe Medical Society, Asheville, N. C.

widely known, I am sure, that endoscopy done for the removal of foreign bodies from the air and food passages constitutes only two per cent of the endoscopies done at the Jackson Clinics in Philadelphia. Ninety-eight per cent are done for the purpose of diagnosis or treatment of disease. In endoscopy we have a method of direct inspection, which, as everyone will agree, is in all fields of medicine and surgery a most important aid to physical examination, indeed, in the vast majority of cases, essential to a correct diagnosis.

In the words of Dr. Jackson himself, bronchoscopy and esophagoscopy are without danger in the hands of a man who has had the proper training. No trauma is necessary and the presence of the bronchoscope or the esophagoscope in the tracheobronchial tree or esophagus is aboslutely harmless. No objections can be raised as to anesthesia because in children under twelve years of age *no* anesthesia is necessary and in older children and adults the smallest quantity of cocain solution locally is all that is needed. Of course there are certain contraindications to the procedure but these are obvious to all and need not be gone into here.

It will be of interest to mention some of the conditions in which endoscopy is of value.

Primary carcinoma of the bronchi and carcinoma of the esophagus can be picked up in their earliest stages and this can be done by no other method. Biopsy can be made when it is advisable. Most men are agreed that the earlier a diagnosis of malignancy is made, the better the chance of recovery. This has proved true in too many cases to leave the shadow of a doubt about it.

Jackson has recently published an article on peptic ulcer of the esophagus the diagnosis and to some extent the treatment of which being accomplished by endoscopy. The condition is far more frequent than is generally supposed.

Any case with esophageal symptoms should not be dismissed, and the diagnosis of globus hystericus should never be made before esophagoscopy is done, or has been omitted for some good reason.

In doubtful cases the diagnosis of tuberculosis has been made frequently by the bronchoscope. Tubercle bacilli have been discovered in secretions from the bronchi where the sputum has time and again been negative. On the other hand, definite diagnoses other than tuberculosis has been made in patients who for years have been treated for tuberculosis and suffered accordingly.

It is believed that many cases of lung abscess, more especially those occurring postoperatively, and seen relatively early, are very much benefitted by bronchoscopic aspiration. Of course, many of these cases recover anyway, but many do not, and endoscopic drainage has apparently been of real value in aiding convalescence.

Bronchiectasis is a condition which all of you know is at best difficult to deal with. After postural drainage and expulsive cough, it has been found that much secretion can yet be aspirated through the bronchoscope. Many patients are greatly benefitted for weeks and even months at a time by a course of bronchoscopies with aspiration, four to six treatments being given over a period of two or three weeks depending on the patient. No hope of cure is held out to these patients and only those are treated, and there are many, who want it done simply as a palliative measure. Hospitalization is not necessary in all cases.

Asthmatic patients, especially those with a purulent tracheo-bronchitis accompanying are greatly relieved often for long periods by aspiration of the secretions and the application of local medication. Some dramatic results have been obtained with the use of autogenous vaccines made from the bronchial secretion where antogenous vaccines made from the sputum were of no value. Stenosis of a bronchus has been found which when dilated endoscopically cured an asthma of seven years standing. Non-opaque foreign bodies have been found, cure of asthma following their removal.

Interesting work has been done on postoperative atalectasis. In several cases bronchoscoped, a main stem bronchus has been found completely occluded by a tenacious thick secretion, which being removed, the lung peripheral to it almost at once filled with air. In some of these cases the bronchoscopy has to be repeated. It is certain that many cases of so-called ether-pneumonia, or post-operative pneumonia, are really cases of atalectasis, as the physical signs may be the same in both cases. Time does not permit my going into interesting experimental

work which has been done by Dr. Gabriel Tucker along these lines.

To conclude, we have in endoscopy:

1. A method of physical examination by direct inspection, which can be carried out with no danger to the patient and which is an invaluable aid in diagnosis.
2. A means whereby certain diseases of the air and food passages can be easily and safely treated, bringing often relief, and sometimes cure.

EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M. D., F. A. C. S., CHARLESTON, S. C.

VASOMOTOR AFFECTIONS OF THE INTERNAL EAR

Professor Georges Portmann, M. D., Bordeaux. March, Annals of Otology, Rhinology and Laryngology

For a long time the action of the sympathetic on the labyrinthine circulation, on the one hand, and on the secretion of the endolymphatic fluid on the other, has impressed otologists. "Glaucome," is a term used again these last years by Aboulker and myself, to designate the hypertension of the endolymphatic fluid.

Lermoyez showed the importance of angiospasm of the vestibular or cochlear branches of the internal auditory artery in certain cases of deafness or vertigo. (Same in retina).

The stenosis of the internal auditory artery, which is brought about slowly, causes a gradual anesthesia of the ear—that is to say—*deafness*. But then the spasm ceases suddenly; the blood rushes again into the labyrinth which is stunned by it. This too sudden afflu, which in the fingers produces ordinary pain, causes here both the special pain of the cochlear organ, which is the buzzing, and the suffering of the vestibular organ, which is the vertigo. Besides that, it abolishes the anesthesia of the ear, that is, deafness.

And thus Lermoyez has summed up under the name of "the vertigo that makes one hear," a particular labyrinthine affection, which seems to be connected really with a spasm of the internal auditory artery.

It is expedient, from another reason, to oppose this syndrome to Meniere's disease; this sudden paryoxysmic, apoplectic and recurrent vertigo, which breaks out in the repose of full health and which was so long united with cerebral apoplectic congestion. (I have seen several cases during past five months.)

In Meniere's disease, and in Lermoyez's syndrome, the phenomena are the same, but they make their appearance in reverse order.

The vertigo which in one case inaugurates the fit, in the other ends it. In one case it suddenly impairs the health, in the other it restores it; in one case it brings deafness, and in the other it cures it.

Meniere's Disease

Good hearing.
Sudden vertigo.
Sudden deafness and decreasing.
Slow recovery.

Lermoyez's Syndrome

Good hearing.
Sudden vertigo.
Gradual deafness.
Quick return of the hearing.

In Meniere's syndrome there is congestion and labyrinthine overflow and in Lermoyez's vertigo there is ischemia, consecutive to the arterial spasm.

Nothing is more debatable, however, than the pathogeny of Meniere's disease.

Kobrak ascribes the pathogency of Meniere's vertigo to angioneurotic fits of the eighth pair of cranial nerves, depending on two principal causes: (1) a great instability of the vago-sympathetic system, and (2) a local labyrinthine trouble.

By experiments with pharmacodynamic substances (atropin, pilocarpin, adfenalin) Kobrak tries to find in each individual case whether it is a question of vagotony or one of sympathicotony.

The vasomotor stasis of the vestibular artery may cause a giddy sensation apart from any other manifestation. All this agrees with the opinion that vertigo is essentially a phenomenon of irritation.

All otologists know that vertigo disappears with the destruction of the labyrinth and that an irritation of the internal membranous ear or of the vestibular nerve is necessary to cause the giddy sensation.

One sees, on the other hand, the reflex vasodilatation which locally accompanies the least irritation of the tympanum and which, when this irritation is too violent, also produces vertigo.

These show well the connection which exists between the vertigo and the phenomena of vasodilatation in the area of the labyrinth.

There are operations on the internal ear for this vertigo but it may not be an operative condition but a medical disorder, treatable by drugs acting on the vasomotor system through the sympathetic nerves.

From this rapid review of the different affections of the labyrinth in which one has brought in, from a pathogenic point of view, the probable existence of vasomotor troubles, one must separate some precise ideas:

Vertigo, when a sign of vestibular suffering is produced by the sudden vasodilatation which follows the spasm in the syndrome of Lermoyez.

The vertigo which, on the contrary, accompanies a rather pronounced ischemia of the labyrinth, disappears after sympathicectomy, the consequence of which is a vasodilatation of the labyrinth.

Tinnitus means cochlear suffering and follows apparently the same rules, being produced either by vasoconstriction or by vasodilatation; it may be cured or ameliorated, according to the case, if one provokes in the region of the labyrinth the vascular action contrary to that which causes it. (This opens a new method of treatment of tinnitus aurium.

Vestibular reflectivity seems to be precisely proportioned to the vasomotor modifications. To vasodilatation corresponds hypoexcitability—to vasoconstriction, hyperexcitability. The cocheal responses are different.

Deafness appears to accompany ischemia of the anterior labyrinth and is caused by vasoconstriction. Sometimes it may be ameliorated or disappear by the action of the vasomotor phenomenon, contrary to that which caused it, that is to say, the vasodilatation. (The areoplane method of restoring hearing.)

Is it possible to select from these scattered observations a clinical syndrome of the vascular spasms of the internal ear? I think that we may now settle the chief symptoms.

The angiospasmodic syndrome of the labyrinth will consequently include; (1) Tinnitus; (2) deafness, vestibular hyperexcitability; (3) sympathetic hypertony. These symptoms consitute a constant syndrome with certain modifications; due to the particular ground submitted to the vasoconstriction; anterior labyrinth, posterior labyrinth, or both together.

Besides this syndrome of arterial resistance or hypertonicity of the labyrinth, we must place the syndrome of hypotony or laxity, in which we shall meet the classical signs of the sensorial suffering, but with vestibular hypoexcitability and sympathetic hypotony.

These two syndromes, Lermoyez and Meniere, may, moreover, succeed each other alternatively in the same patient.

According to the individual one observes, in fact, different reactions of the vegetative system under the influence of various causes.

The most diverse causes will be found as the origin of the vagosympathetic troubles and hence of the labyrinthine vascular spasms. The causes may be either mechanical, endocranial, toxic or even simply phychic.

The most important cases susceptible of acting on this regulating apparatus are undoubtedly the action of the nervous system and the action of the endocrine glands, above all, the harmone of the suprarenal gland—adrenalin.

(Long ago it was found that atropin benefitted some cases and adrenalin others. This discussion gives us at least a basis for further work on our treatment of cases of vertigo and tinnitus.)

SOCIETY REPORTS

YORK COUNTY MEDICAL SOCIETY MEETING

The regular bi-monthly meeting of the York County Medical Society was held the night of June 12 in the Johnson Hall at Winthrop College. We invited Drs. J. W. Jervey, Hugh Smith and E. A. Hines to be present and give us papers at this meeting. All were present and gave our society a very pleasant and profitable entertainment. We had seventeen of our members present and Dr. V. K. Hart of Charlotte as visitor. Dr. C. B. Harrell who has recently moved to Rock Hill was a guest.

The President, Dr. Norma Dunning, after appropriate remarks about how pleased we were to have these visitors with us and especially on such a stormy night introduced the first on the program, Dr. Hugh Smith whose subject was "Diagnosis of Cholecystitis." Dr. Smith first described the normal action of the gall bladder in response to the secretions of the stomach, the enzyme of the duodenum; the nerve control of the gall bladder and its emptying of the bile through ampulla vater into the duodenal contents; the signs and symptoms of cholecystitis. He very nicely differentiated the symptoms of this pathology with those of neighboring organs. The fact that its symptoms are more continuous, less intermittant and not relieved by antiacids and diet treatments. He has found the intravenous administration of the dye of great help for Rontgenography. This paper was discussed by Drs. Herlong, Ward and Dunning.

The next on the program Dr. Jervey in his introductory remarks praised this Piedmont section for its men of the past, praised the food commission for the wonderful work done by Dr. Wm. Weston and his co-laborers. There is a reason why the Palmetto Regiment gave such a memorable account of themselves in the Mexican War when after their request to die, "near the flashing of the guns," they were able to be the first to wave the banner of the Palmetto Regiment over the City of Mexico on September 13, 1847. The same courage, bravery and endurance was shown in the Civil War. Yea, the boys from this very section were too much for the strong Hindenburg line when the Thirtieth Division charged it. In all likelihood our iodine content proven higher than in any part of the United States is a determining factor. Next Dr. Jervey introduced two case reports of post diphtheria paralysis following tonsil and adenoid removal the 12th week after the attack of diphtheria that had been treated with the antitoxin. One case proved fatal. These were interesting because of the long interval following the attack of diphtheria. The next two case reports were of asthma due to ethmoidal and maxillary infections. They were definitely proved to be cured after a conscientiously painstaking and thorough removal of all the infected cells. Dr. Jervey's last case report was that of a cerebro spinal rhinorrhea meningitis complication. This case ran a classical picture of meningitis, was repeatedly given intraspinal injections of antimeningococcic serum. It had a continuous dripping from the nares. Both the stock and autogenous serum were used. Patient recovered, in all likelihood due to the drainage through the cribriform plate of the ethmoid. Dr. V. K. Hart very ably discussed Dr. Jervey's cases, especially the last case.

Dr. E. A. Hines was next on the program. Title: "Enlarged Outlook for Organized Medicine." Dr. Hines told of South Carolina being among the first to start organized medicine in the U. S., of our fine charactered men who by their influence had the A. M. A. come to Charleston with their fifth meeting. He gave a bright future to organized medicine in South Carolina through plans of reorganizations of State and County units along economic lines that he hoped soon to see in effect. He showed how it should help to make the program of our State Medical meetings less made up of specialists and more general men on the program.

W. K. McGill, M. D., Secretary.

REGULAR MONTHLY MEETING OF THE SPARTANBURG COUNTY MEDICAL SOCIETY, HELD AT GENERAL HOSPITAL, MONDAY, JULY 29, AT 8 P. M.

The regular monthly meeting of the Spartanburg County Medical Society was held Monday, July 29, at 8 P. M. at the General Hospital. The minutes of the previous meeting were read and approved.

Dr. W. A. Mulherin, of Augusta, Ga., delivered a very interesting lecture on acute rheumatic fever. Dr. Mulherin stated that acute infectious arthritis, endocarditis, and chorea were due to the same infection and very different from adult rheumatism. Very often a heart murmur is the first symptom or sign; it may precede the fever and often found before the child complains of pains in the joints. Rheumatic fever is usually seen in children over five years of age. The child should be put to bed and kept there until all

fever subsides. Infected teeth and tonsils should be removed.

Dr. W. W. McKibben delivered an interesting discussion concerning the value of vaccines and serums. Dr. McKibben said that convalescent serum was of value in anterior poliomyelitis and measles, cold and flu vaccine was often good as a prophylactic, erysipelas and scarlet fever serums were good in treatment of these two diseases but should not be used as preventitives, rabies vaccine should be given if there is any doubt, babies should receive smallpox vaccination at 3-6 months, and diphtheria toxin-antitoxin at 6-12 months, whooping cough vaccine should be used as a prophylactic and also large doses of fresh vaccine frequently repeated are of value in the treatment of whooping cough.

In answering questions asked by Drs. D. H. Smith, G. E. Thompson, and S. O. Black, Dr. McKibben replied that he did not know the exact value of polyvalent serum in the treatment of sore throat, that he also did not know the exact duration of the immunization following injections of rabbies vaccine, but that it was probably two to twelve months, and that usually intubation was all that was necessary in the treatment of laryngeal diphtheria.

Dr. Oren Moore of Charlotte gave a very instructive discussion of pre-natal care. He stated that prospective mothers should be warned against dancing, surf bathing, long automobile trips, especially in the early months of pregnancy. Dr. Moore also stated that therapeutic abortion did not relieve the thyroid toxemia of pregnancy, but x-ray treatments over the thyroid gland should be given.

Dr. F. H. Richardson emphasized the need of educating the public by newspaper articles, radio talks, and moving pictures, and also the need of educating the medical profession and commended the lecture courses given at Statesville, N. C.

Dr. D. L. Smith moved that the resolution of the Charleston County Medical Society regarding registering those doctors who have passed the National Board of Medical Examiners without fee or examination be adopted by this society. Motion was seconded and carried.

The Secretary emphasized the need and desirability of the Society owning a Medical Directory. Dr. S. T. D. Lancaster moved that the Treasurer be authorized to buy a directory. The motion was seconded and carried. There being no further business the Society adjourned.

S. O. Black, President,
W. M. Sheridan, Sec.-Treas.

REGULAR MONTHLY MEETING OF THE SPARTANBURG COUNTY MEDICAL SOCIETY, HELD AT GENERAL HOSPITAL, FRIDAY, JUNE 28, AT 8 P. M.

The regular monthly meeting of the Spartanburg County Medical Society was held Friday, June 28 at 8 P. M., at the General Hospital. The minutes of the previous meeting were read and approved.

Dr. E. W. Carpenter of Greenville, S. C. gave a very interesting discussion of the maxillary sinus and showed some lantern slides. Dr. Carpenter stated that the maxillary was more frequently infected than any other sinus. In making a diagnosis of infection of the maxillary sinus lipiodol injections had been found of great value.

Dr. Wm. Allen of Charlotte, N. C. reported two cases of typhoid spine and emphasized the value of typhoid vaccine in the treatment of this condition, the exquisite pain being usually relieved after one or two injections.

Dr. Allen showed some very interesting slides of these two patients and also of x-ray films.

Dr. J. P. Kennedy, Charlotte, N. C., gave a very able discussion of the treatment of the different infections of the hand. Dr. Kennedy emphasized the danger of a cut, abrasion, or furuncle on the back of the hand. On account of the abundant lymphatics infection spreads rapidly up the arm. The hand and forearm should be splintered and hot wet dressing should be applied continuously. Incisions should not be made until the infections show areas of localization.

Dr. Kennedy stated that infection in the connective tissue produced a felon, paronychia, or palmar abscess, and discussed the treatment of these and also infection of the tendon sheaths.

About thirty members and five visitors were present. The visitors were Drs. Sheriff, Jordan, Murray, Tyler, and Carpenter. Drs. Murray and Tyler recommended the establishment and maintenance of a publicity department to be run in conjunction with the State Board of Health. Dr. Tyler suggested that the physicians in each county make an effort to interest the county delegations in order that an appropiation of fifteen thousand dollars might be made to hire a full time director and send out bulletins, and also utilize the press, moving pictures, radio, and normal schools in spreading health information. Dr. Tyler invited the Spartanburg County Medical Society to visit the Greenville County Medical Society when they decided to have a health meeting. Dr. Finney moved that the Spartanburg County Medical Society accept Dr. Tyler's invitation. The motion was seconded by Dr. Carter.

Drs. Hilla Sheriff and W. B. Jordan were nominated members of the Spartanburg County Medical Society.

The Secretary read letters from the Director

of the Bureau of Vital Statistics of the State Board of Health urging that all births be registered, and from Dr. W. Atmar Smith of the Charleston County Medical Society urging the Spartanburg County Medical Society to ask the State Board of Medical Examiners to admit those who have passed the National Board of Medical Examiners without fee and without examination. Action on these matters was postponed until the next meeting of the Society. There being no further business the Society adjourned.

S. O. Black, President,
W. M. Sheridan, Sec.-Treas.

SEVENTH DISTRICT MEDICAL SOCIETY TO MEET

Sumter, S. C., August 12, 1929.

Dear Doctor:

Like the Graf Zeppelin and the endurance fliers, medicos have been up in the air (financially speaking) for some time. But things look a little better now for a satisfactory landing, although, unlike the fliers, in order for us to come down nicely we must have a big Fall!

May be "I'll pay you in The Fall" will prove to be more than a cheerful lie this time.

Anyway, we can live in hope, and all have a big time in Sumter exactly one month from today. Yes, that's the date for our annual meeting of the Seventh District Medical Association, September 12th, the second Thursday in the month.

We are planning to have some good papers from our own members, as well as from other men in this, and from other states. Please let the Secretary have the title of your paper by September 1st, and do not forget that you are expected to join in on the report of clinical cases.

With kindest regards, and best hopes for a great meeting,

Yours very sincerely,
CARL B. EPPS, M. D.,
Secretary-Treasurer.

H. A. Mood, M. D.,
President.

SITUATIONS WANTED

WANTED: Salaried Appointments for Class A Physician in all branches of the Medical Profession. Let us put you in touch with the best man for your opening. Our nation-wide connections enable us to give superior service. Aznoe's National Physicians' Exchange, 30 North Michigan. Chicago. Established 1896. Member The Chicago Association of Commerce.

MINUTES

REPORT OF COUNCILOR—FIRST DISTRICT

TO HOUSE OF DELEGATES
South Carolina Medical Association,
Gentlemen:

It gives me pleasure to be able to report that the First District is in an excellent condition. Some of the Counties whose interest was not up to the usual standard have given evidence of renewed enthusiasm by larger and more regular meetings.

I feel confident that had it not been for the excessive rains damaging the roads in the district that there would have been more and better meetings throughout the year.

The prospects for the year are perhaps brighter than ever before. The roads which, in the past, offered an almost insuperable barrier have in large part been hard-surfaced, so that I feel that we are now in position where frequent and well attended meetings are practically assured.

Your Councilor has made every effort to visit every County Society at least once and to attend the District meetings. The success of my efforts was seriously interferred with owing to sickness in my family but I have succeeded in visiting all Societies except one.

The Medical Society of South Carolina (Charleston County Medical Society) has 87 members enrolled. Held 18 meetings during the year with average attendance of 34. Effort is being made to provide an attractive program and from time to time, distinguished men in the profession are invited to address the Society. The Scientific work of this Society is on a very high level. There are four eligible physicians not enrolled. There are four chiropractors, one osteopath and one or two illegal practitioners, graduates of regular schools.

The Colleton County Medical Society has a membership of eight with six meetings during the year with average attendance of six or seventy-five per cent. There are no eligible physicians not enrolled, no chiropractors, no osteopaths two illegal practitioners, graduates of regular schools.

The Beaufort-Jasper Society has an enrollment of nine, had four meetings during the year with average attendance of seven or 58 per cent. One eligible physician not on roll, no chiropractors, osteopaths or illegal practitioners.

The Dorchester County Society deserves to be commended. Renewed enthusiasm is evidenced by having 11 meetings, membership of 7, average attendance of 5, average attendance of 72 per cent. They report three eligible practitioners not members. No illegal practitioners, chiropractors, osteopaths.

Berkeley County Society had eight meetings, membership of 6, average attendance of 4, or 46 per cent. There are no illegal practitioners, chiropractors or osteopaths, and no eligible practitioners not members.

There were two district meetings during the year. The attendance was 37 at one and 23 at the other meeting. At both meetings, the program was full and the papers of a high order and well discussed.

In conclusion, will say that the prospects for next year are brighter than in many years.

Respectfully submitted,

J. H. Cannon, M. D.

Report of the Councilor of the Second District

Mr. Chairman and members of the House of Delegates of the South Carolina Medical Association I herewith submit my annual report as Councilor of the Second District, comprising the counties of Aiken, Edgefield, Lexington, Richland and Saluda.

A report from Aiken does not show very much. Very small attendance at their meetings, six meetings a year, no irregulars, eight members, 23 eligible that are not members, and no illegals.

The Association known as the Ridge Association comprising the counties of Edgefield, Lexington and Saluda report twenty enrolled with two honorary members. **Twenty-two eligible physicians that are not members.** They meet every two months, making six meetings a year. They are pretty active and display considerable interest.

Richland County, which appears under the name of the Columbia Medical Association report one hundred and four members and with twelve meetings a year, average attendance of thirty-two. No illegals, one regular not eligible for membership, three show to be regular, probably eligible but are not members. This Society maintains a very full scientific program. They have from one to three good papers or scientific discussions each month.

As we have already stated Aiken shows very little interest in scientific organized medicine.

The Ridge Association displays quite a bit of interest though the report shows a large number of eligibles that are not members. We have put forth every reasonable effort to create greater interest in all the Counties, but so far have failed to better conditions.

As to Richland County, we haven't quite one hundred per cent but nearly so, about as good as we can hope for.

Our District meeting meets twice a year; generally very well attended and usually have a very good scientific program though I am strongly of the opinion that one meeting a year would be productive of more good and I propose at our next meeting to recommend such a change.

Respectfully submitted,
Sam'l E. Harmon, M. D., Councilor.

Report of the Councilor of the Third District

The Third District is composed of Abbeville, Greenwood, Laurens and Newberry Counties. McCormick, that was formerly with this District, has withdrawn and its members united with their neighboring counties. This was done on account of their small membership and all interested agreed that it would be of greater interest and profit to them.

Compiling the reports of the Secretaries from the respective societies, I find, the Third District is still full of enthusiasm and activity. Harmony and good will exist and it seems to me now that the sentiment of our District is cooperative service instead of commercial competition. This sentiment, prevailing throughout the profession, no doubt, in my mind will dignify the ethics of the profession and promote its efficacy. We find our societies have had more regular meetings, and special meetings have been had for the interest and pleasure of the different societies.

Following the report of the secretaries further we have the information below:

A total membership of eighty.

Total meetings for the year, forty-four.

Total number of eligible physicians not enrolled, eleven.

Chiropractors, one.

Osteopaths, none.

Illegal practitioners, none.

This report, I think, represents a very creditable showing of the work and interest in our District.

We always have the regular annual Third District meeting, held last year at Greenwood, with a barbecue. This year we go to Laurens and we expect to give the usual successful meeting.

Respectfully submitted,
T. L. W. Bailey, M. D., Councilor.

Report of the Councilor of the Fourth District

Mr. Chairman:

I beg to submit, herewith, my report as Councilor of the Fourth District.

Score cards were received from the following County Societies comprising this District:

Oconee, Pickens, Anderson, Spartanburg, Union and Greenville.

Oconee County reports meetings held quarterly with an average attendance of 10 and a total enrollment of 16; no irregulars. Speakers are invited from outside the County to address the members on subjects of interest. One meeting during the year was held jointly with the Women's Auxiliary. Oconee County entertained the members of the Fourth District Society at their annual meeting in October, when an interesting program was carried out.

Pickens County reports an enrollment of 18, an average attendance of 50%; 12 meetings were held during the year in various parts of the country. Papers and case reports are presented by the members. There are two eligible physicians not on the roll; no irregulars, no Chiropractors or Osteopaths.

Anderson County reports an enrollment of 51 members with an average attendance of 20 to 25%. Eleven meetings during the year were held. Papers and case reports are presented by the members. Each meeting is followed by a luncheon. A spirit of fraternalism and good fellowship prevails to a remarkable extent.

Spartanburg reports meetings each month with a total enrollment of 59 and an average attendance of 50. There are 52 eligible physicians not enrolled. Papers and case reports are presented by the members. Several speakers of distinction have been invited to address the Society during the year. On these occasions members of the adjoining County Societies have been invited to meet with them. It has been the custom of this Society to entertain its guests at supper following such meetings.

Spartanburg County has done much during the year to foster good feeling with the various societies of this District.

Cherokee County reports 8 meetings held during the year. They have a total enrollment of 14 with an average attendance of 9. This small Society is to be commended for its increased activities, the organization and operation of this Society has been of much benefit to the profession of this County.

Greenville County Society reports 13 meetings during the year with a total enrollment of 94 and an average attendance of 40 to 45%. A variety of programs are carried out; occasionally some speakers are invited to address the Society. Such meetings are usually followed by suppers. Members of the adjoining County Societies are invited to these meetings as the guests of the Society and its members. There are 4 eligible physicians in the County not enrolled; 3 Chiropractors and 4 Osteopaths are in this County. There are no illegal practitioners.

Union County: Reports from this Society give a total enrollment of 10 with an average atten-

dance of 6. Very few meetings were held during the year. There are 4 eligible physicians in this County not enrolled. There are no Chiropractors or Osteopaths.

There are 341 eligible physicians in the Counties comprising the Fourth District, with a total enrollment of 262, a gain of 24 enrolled and a gain of 28 in the total number of those eligible, during the year 1929. About 80% of these eligible physicians are enrolled.

It is to be regretted that Spartanburg County continues to show a very large number of physicians not enrolled; this, however, is to some extent explained by the very large area embraced in this County. There are many small towns situated at some distance from Spartanburg. There are many men in these towns who appreciate the benefit of organized medicine who should in some way be reached.

It is very gratifying to note that Oconee and Cherokee Counties report an enrollment of 100%.

During the year all County Societies were visited by me, and I am glad to be able to report a 100% organization of the Societies in this District. The meetings attended were of considerable interest; a regular program was carried out at these meetings with the exception of Union and Cherokee Counties, which Counties were visited at a call meeting.

Dr. R. E. Hughes, our President, was kind enough to visit these Societies with me, and we were cordially welcomed by the membership. Practically all members were present and an hour of interesting discussion was engaged in at all meetings.

The Fourth District Society held its annual meeting with the Oconeee County Society at Seneca in October. A very large number of doctors was present. The day's program was well filled, several most excellent papers were presented. The members and guests were entertained at dinner by the Oconee Society.

The following quotation taken from the lay press prompts me to offer this suggestion: That one meeting a year of each County Society be devoted to the subject of organized medicine:

"The individual doctor has no grievance against any charitable organizations except where such organizations advertise unfairly and by so doing draw such tremendous number of patients that they gradually undermine the very existence of the private doctor. Instead of finding only the poor and needy at clinics we find great number of people well able to afford a private physician. Whenever the problem of medical fees is discussed, the doctor comes in for the most severe criticism and abuse. He is painted as less ethical than mercenary and as forgetting all the noble precepts of his profession. Yet he is still continuing to give his services gratis to the thousands of free, reputable clinics through the hospital a service which no other profession or business renders . . . . ."

Respectfully submitted,
R. C. Bruce, M. D.,
Councilor, Fourth Med. Dist.

Report of the Councilor of the Fifth District

York: This County has thirty-one members on the roll. There were four meetings during the year with an average attendance of fifteen. There are two eligible physicians not on the roll. There is one chiropractor in the County.

Lancaster: This County is not organized at present. There are about fifteen doctors there.

Kershaw: This County has a membership of thirteen with twelve meetings during the year and an average attendance of ninety per cent. This Society deserves special commendation for the character of its scientific programs and the large attendance.

Fairfield: This County has four members with only one meeting during the year. There are eight eligible physicians not on the roll.

Chester: This County has four members, two meetings during the year with an average attendance of eight. Three eligible physicians not on roll. There are three chiropractors in the County.

An unusually successful District Meeting was held at Chester with a large attendance of members from the various counties and Officers of the State Medical Association.

Respectfully submitted,
J. R. Desportes, M. D.,
Councilor.

Report of the Councilor of the Sixth District

The Sixth District is composed of the counties bordering on the Great Pee Dee River and Horry County.

There has been increased interest in medical affairs and all of the Societies are organized and functioning.

The Pee Dee Medical Society, the official Society of the district, meets at Florence, once yearly, and is always well attended and enjoyed. It is the second oldest medical Society in the State, Charleston being the older.

Florence County Medical Society: Dr. James McLeod, President, Dr. P. D. Hay, Jr., Secretary, both of Florence, S. C. Has thirty members enrolled. Has five meetings during the year, with an average attendance of twenty-five. They serve a banquet with each meeting, and have a visiting specialist along with the local men on the program. Number of eligible physicians not on roll, eighteen. Number of Chiropractors, none. One Osteopath. No illegal practitioners graduates of regular schools, though there is one who has neither diploma or County license.

Darlington County Medical Society: Dr. E. H. King, Hartsville, President, and Dr. Julian T. Coggeshall, Darlington, S. C., Secretary. Has fifteen members on roll, has four meetings during the year, with an average attendance of ten. There are Five eligible physicians not on roll. No Chiropractors, no Osteopaths. No illegal practitioners.

Chesterfield County Medical Society: Dr. D. C. Griggs, President, Pageland, S. C., Dr. R. L. Gardener, Chesterfield, Secretary. Twelve members on roll, twelve meetings a year, with an average attendance of seven. There are three eligible physicians not on roll. No Chiropractors, no Osteopaths. One illegal practitioner.

Marlboro County Medical Society: Dr. L. R. Kirkpatrick of Bennettsville, President, Dr. D. D. Strauss of Bennettsville, Secretary. There are fourteen members on roll, with eight meetings a year and an average attendance of eight. One paper by a local member is read and case reports presented and discussed by all present. There are two eligible physicians not on roll. One Chiropractor, no Osteopaths. No illegal practitioners.

Dillon County Medical Society: Dr. John B. Setzler of Dillon, President, Dr. S. C. Henslee of Dillon, Secretary. There are eight members on roll, have one meeting during the year, with an average attendance of five. There are two eligible physicians not on roll. Two Chiropractors. No Osteopaths. No illegal practitioners.

Marion County Medical Society: Dr. D. W. Green, President, Mullins, S. C., Dr. H. K. Jenkins, Secretary, Mullins, S. C. There are fourteen members on roll, two meetings a year, with an average attendance of ten. They have started monthly meetings with two case reports thoroughly worked out, with laboratory findings, completely discussed at each meeting. There is one irregular in the County. One eligible physician not on roll. No Chiropractors. No Osteopaths. No illegal practitioners.

Horry County Medical Society: Dr. J. D Thomas, Loris, S. C., President, Dr. Paul E. Sasser, Conway, S. C., Secretary. There are fourteen members on roll, two meetings a year, with an average attendance of seven. There is one eligible physician not on roll. No Chiropractors. No Osteopaths. No illegal practitioners.

In reference to the illegal practitioner reported to me from Florence County, will say, that I investigated the report, and it was found that the offender was a woman a Mrs. Lee McDaniel, Jr., who resides in Florence County near Hemingway, and that she was doing real harm by reason of ignorance or otherwise. One case reported was her treatment of a young woman for prolapsed uterus, in which she assured the patient that she had replaced it and she would be O. K. A few days later a physician was called and found the woman to be suffering from an acute appendix, which on operation was found by the surgeon to have been ruptured for several days, and came very near losing her life.

It was suggested to me that perhaps the best way to handle this case would be to try and get a restraining order from the presiding Judge in her District, and we succeeded in getting an order of Court from Judge Shipp, restraining her from practicing medicine without a license. Thus putting the burden of proof on her shoulders, and if she failed a permanent injunction would be issued, which if violated she could be held for contempt of court criminally and sent to jail. A hearing was ordered before Judge Shipp in Florence on April 20th, and through her attorney, she admitted that she was a resident of Florence County, and that she is neither licensed or legally registered as a medical practitioner; but denied that she is or has been practicing medicine against the statutes provided there for. This made it a question of fact, rather than one of law, and consequently Judge Shipp did not have the jurisdiction to decide it.

Accordingly our attorneys have secured from the Court a restraining order and injunction directed against this party, enjoining her from the further practicing of medicine within this State until after this case, can be fully heard in detail and decided on its merits. My bond of $100.00 was required and given to indemnify this defendant against damages. This, frankly is all we need or want, as the case must remain in this status until a further order of the Court, and it is our opinion that the whole matter is perhaps ended where it is and that it will never come up on its merits for any testimony to be actually taken, and the lady will thus remain permently enjoined. If, however, the defendant pushes later for a hearing, it will be an easy matter to get the required data and witnesses to prove our charge.

I employed Attorneys Riley and Bellinger of Bennettsville, to do this work, and there is a small actual expense connected, if there is a fund provided for such expense, would like for this small bill to be paid, if there is not a fund would ask that that there be one provided and that the association order it paid.

Respectfully submitted,

C. R. May, M. D.,
Councilor of the Sixth District.

Report of the Councilor of the Seventh District

The district meeting was entertained by the Clarendon County Association. We had about thirty present, and one of the best district meetings we have ever had.

Clarendon County, reports that it is uncertain as to the number on the roll as most of the men send their dues direct to the State Secretary. Number of meetings in the year three, average

attendance 5-8. Have difficulty in getting a good percentage of members to attend meetings. One Chiropractor.

Georgetown County, the secretary's report is: "No election of officers or meetings during the year." On roll 5, no quacks.

Lee County, 8 members, 2 meetings year, attendance 5, one eligible not on roll.

Sumter County, number 21, meetings 10, average attendance 10, 4 eligible not on roll, chiropractor one.

Williamsburg County, 8 members, meetings during year four, average attendance 5, eligible not on roll 7, one chiropractor, one illegal practitioner.

Respectfully submitted,
T. R. Littlejohn, M. D., Councilor.

Report of the Councilor of the Eighth District

To the House of Delegates of the South Carolina Medical Association.

The Councilor of the Eighth District respectfully submits the following report:

The Eighth District embraces the Counties of Allendale, Bamberg, Barnwell, Calhoun, Hampton and Orangeburg, all of which have active medical societies except Calhoun whose few physicians we urge to affiliate with the Orangeburg Society.

Allendale has seven members on roll, two eligible physicians not on roll, no chiropractors, osteopaths or illegal practitioners.

Bamberg has ten members on roll, no eligible physicians not on roll, no chiropractors, osteopaths or illegal practitioners.

Barnwell has eleven members on roll, no eligible physicians not on roll, one chiropractor, no osteopaths or illegal practitioners.

Hampton has ten members on roll, five eligible physicians not on roll, no chiropractors, osteopaths or illegal practitioners.

Orangeburg has twenty-seven members on roll, nine eligible physicians not on roll, one chiropractor, no osteopaths or illegal practitioners.

This makes a total of sixty-five members in the District, sixteen eligible physicians not on roll, two chiropractors, no osteopaths or illegal practitioners.

All the Societies are actively and harmoniously working.

Respectfully submitted,
J. E. Warnock, M. D., Councilor.

Elimination
and
Alkalinization

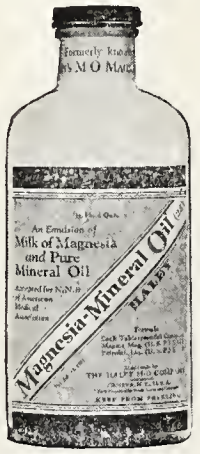
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The Journal

OF THE

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EDITORIAL

MEETING A. M. A. PORTLAND

The 80th Annual Session of the American Medical Association held in Portland, Ore., July 8th to 12th inclusive, was not notable for a large attendance as compared with those held in more central locations, there being only a few over three thousand registrations, however, those attending were amply repaid in many ways.

Every effort was made to provide entertainment for the visitors. That they accomplished their purpose is to put it mildly. Motor rides, boat rides, garden parties, luncheons, receptions, horse shows, etc., etc., to mention some of the features.

In the House of Delegates there were many things mentioned or considered at length that deserve thoughtful consideration by the Profession. The minutes of the sessions are published in the Journal of the A. M. A. and should be read by every member.

President Thayer in his address urged that every member get in touch with their senators and congressmen and urge their support to have the appropriation continued so as to maintain "The Index Catalogue of the Surgeons Generals Library." It is rumored that there is danger of the appropriation being discontinued and it is felt that if the members of congress and the senate were made familiar with its value there would be no question about an adequate appropriation forthcoming.

He expressed regret that there was so much reckless and ill-advised law making. His remarks in which he deplored the making of laws as to what we shall, eat, drink or as to what we may wear aroused the ire of Dr. Clarence True Wilson, who through the press denounced the President as a wet and that his election would have failed had it not been for the support of wet lobbyists, etc., this naturally resulted in considerable indignation.

President Elect Harris pointed out that the

laity are frequently misled by statements made by limited groups of physicians and are misinterpreted as the opinion of the entire medical profession. It should be borne in mind that only expressions emanating from the house of delegates of the American Medical Association carries the stamp of approval of the medical profession of the United States.

He also commented upon the article frequently appearing in the lay literature criticising the profession regarding the high cost of medical care. It should be pointed out that the medical profession is aware of the situation and has a committee at work on the problem.

Secretary West stressed the importance of the County Medical Society and urged that all the members of organized medicine give their whole hearted support to it. He emphasized the danger bound to result to the component county society, due to the members belonging to so many other organizations thereby dividing their support.

Ex-President W. A. Pusy, introduced a resolution providing for the investigation of hospitals, clinics, corporations and various other organizations practicing medicine to be reported on at the next meeting.

Various other matters were taken up and discussed such as the approval of the high standards used in the selection of examiners for recruits in aviation; investigation of the dangers of electric refrigeration; investigation of the teaching of obstetrics with the view of alloting more time to the teaching of this important subject if it is found to be needed; consideration of unethical advertising by hospitals; the gratifying increase of membership to the A. M. A. by approximately 200 members yearly for the past ten years; consideration of measures to provide means for adequate housing of A. M. A. headquarters which are badly overcrowded; approval of the National Defense Act; motion objection to proposed tariff on surgical instruments, X-Ray equipment, scientific glassware, etc.

Election of officers resulted as follows:

President, Dr. M. L. Harris, Chicago.

President Elect, Dr. W. G. Morgan, Washington, D. C.

Vice-President, Dr. E. A. Sommer, Portland, Ore.

Secretary, Dr. Olin West, Chicago.

Treasurer, Dr. A. A. Hayden, Chicago.

Speaker of House, Dr. F. C. Warnshuis, Mich.

Vice-Speaker of House, Dr. A. E. Bulson, Indiana.

Trustee, Dr. D. Chester Brown, Danbury, Conn.

Trustee, Dr. A. H. Bunce, Atlanta, Ga.

J. H. Cannon, Delegate.

COMMENTS ON COMMITTEE APPOINTMENTS

As has been stated in a previous editorial, before the gavel fell closing the Charleston meeting, the Committee on Scientific Work for the coming year was appointed and since that time has been constantly looking toward the promotion of a great meeting to be held at Florence early in May, 1930. The House of Delegates adopted the report of the Committee on Constitution and By Laws advising that the committees be simplified and some new committees provided for. It will be noted that the committees on hospitals and medical education have been merged. A new committee on publications has been authorized. The duty of this committee will be to supervise the papers and other matter appearing in the Journal. Most of the papers read before the State Association have been published as read but there is need for a careful consideration of the scientific value of papers read before the State and constituent societies if we are to maintain a reprensentative Journal.

One of the outstanding problems particularly of the general practitioner is that of his economic status. All over the country there appears to be a demand for a clearer conception of the cost of medical care, of the part played by the general practitioner and specialist in the picture and the different phases of hospitalization. A committee, therefore, on Medical Economics has been brought into being in our State Association to study these and many other questions relating to the public and the profession.

The President has given very careful consideration to the appointment of all of the com-

mittees. It is believed that as a result we will have the best year of the State Medical Association yet recorded in all of its activities.

COMMITTEES S. C. MEDICAL ASSOCIATION 1929-30

Committee on Scientific Work

Dr. Hugh Smith, Chairman -- Greenville, S. C.
Dr. James McLeod ---------- Florence, S. C.
Dr. Walter R. Mead -------- Florence, S. C.
Dr. Chas. R. May -------- Bennettsville, S. C.
Dr. Edgar A. Hines ---------- Seneca, S. C.

Committee on Public Policy and Legislation

Dr. Thos. A. Pitts, Chairman -- Columbia, S. C.
Dr. R. S. Cathcart -------- Charleston, S. C.
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Committee on Public Health and Instruction

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Committee on Necrology

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Dr. R. L. Gardner -------- Chesterfield, S. C.

DEATH OF DR. WALTER G. HOUSEAL

As we go to press we learn of the death of one of the most active and loyal members of the South Carolina Medical Association. This news will be received with the keenest regret by every member of the Association and by a large number of friends throughout the State. Dr. Houseal early in his professional career began to work for the best interest of organized medicine. He held many positions of honor in his county, district and the State Association. Dr. Houseal will be greatly missed by his professional brethren. An extended notice will be published later by the Necrology Committee.

THE MARLBORO COUNTY GENERAL HOSPITAL

First Hospital in South Carolina built with aid of the Duke Endowment, how provided for, construction, equipment, management

In "The State" of August 11th appeard an editorial comparing hospital and medical care in South Carolina with other states of the Union, and it was stated that South Carolina ranked forty-eighth, or last, in point of hospital beds and physicians per thousand population. The editorial mentioned was based on figures complied by Dr. W. S. Rankin, Director of the Hospital Section of the Duke Endowment. Therefore, it should be of interest to the medical profession of this State to learn of the development, construction, and operating management of the first county hospital to be erected with the aid of the Duke Endowment in South Carolina.

In November of 1927 a small group of interested citizens of Bennettsville agreed to underwrite the expenses of a campaign, to be conducted by an institutional financing firm (Bard, Hoffsommer, and Williams of New York), for the purpose of raising funds with which to build and equip an hospital. Dr. Rankin of the Duke Endowment was invited to make an address to a mass meeting in opening the campaign, and he made the startling announcement that his organization had some surplus funds to be used in aiding communities to erect hospital buildings. His announcement, do doubt, assured the success of the campaign, and the citizens of Marlboro County subscribed the sum of $66,640. Of this amount approximately $50,000 has been



Marlboro County General Hospital, Bennettsville, S. C.

collected. The Duke Endowment gave $25,000 building aid, and when the building was completed the Trustees very generously appropriated for us another $25,000 for equipment and completion of the building.

The Marlboro County General Hospital has a normal bed-capacity of thirty-five, but it is so arranged as to be able to care for about forty-five or fifty patients without uncomfortably crowding. The building consists of three floors, the ground floor housing the kitchens, refrigerator room, boiler room, serveries, dining-rooms, storage and accident rooms, x-ray and laboratory departments, and the section for the care of colored patients. The second, or main floor, provides administrative offices, reception rooms, superintendent's quarters, and patients quarters, including a pediatric ward. On each end of this floor is a large and airy sun-parlor. The third floor houses the maternity and female surgical departments, the nursery, and the operating department with major and minor operating rooms, delivery room, dressing and sterilizing rooms. On each end of this floor is a large, uncovered, open porch. The building is provided with all modern conveniences and appointments that an hospital should have, and it is one of the best and most modernly equipped hospital buildings in the South.

The management of this institution is in the hands of a self-perpetuating Board of Trustees selected so as to represent each section of the County. The Executive Committee (3) of this Board have actual control of the hospital affairs, and the Superintendent, a very efficient and capable one, is the Executive Officer of the Board of Trustees. The medical and surgical work is controlled by the Active Staff, composed of the members of the Marlboro County Medical Society, and outstanding men of the profession in the Carolinas have been invited to become members of the Consulting Staff. Dr. Charles R. May, President of the South Carolina Medical Association is Chief-of-Staff, Dr. P. M. Kinney vice-Chief-of-Staff, and Dr. Douglas Jennings is Secretary. Practically all of the work is done by members of the Active Staff, occasionally a member of the Consulting Staff being called upon to operate on or treat a patient.

The Board of Trustees have on hand a fund, appropriated in the County Supply Bill, for the treatment of charity patients from the County. The Duke Endowment contributes $1.00 per day for each free and part-pay patient. With this help, the institution will, no doubt, be self-sustaining and we do not contemplate having to go before the people in an election to ask for a tax levy for the support

of the hospital. Charity patients from out of this County are cared for at the rate of $3.50 per day, the Duke Endowment paying $1.00 per day of this and the County from which they come being asked to pay the balance. No professional fees are charged patients admitted as charity cases.

Marlboro County is very proud of her new, modern hospital building and equipment, as evidenced by the throngs which visited the building on Opening Day, July 2nd. Quite a large number of visitors from out of the County, including many members of the medical profession, called and were shown over the plant. All of these were most cordial and liberal in their congratulations on the splendid building and equipment.

The Board of Trustees and the Medical Staff will be very pleased to give any information as to the developing, financing, planning, construction, equipment, or management of this institution. Anyone desiring such information may address Dr. Douglas Jennings, Bennettsville, S. C., Secretary of the Medical Staff, who was the leading spirit in beginning and carrying forward this movement to secure a public-owned hospital in Marlboro County, aided by the Duke Endowment.



PRESIDENT'S PAGE

By C. R. May, M. D., President South Carolina Medical Association

The last census of physicians of South Carolina taken from the Medical Directory of the American Medical Association gives us one thousand three hundred and three, which is about two hundred less that the census of several years ago. And out of that number we only have seven hundred and ninety-three enrolled as members of the South Carolina Medical Association, surely out of thirteen hundred physicians practicing medicine in the State we should have more than seven hundred and ninety-three enrolled. It is my great desire and hope that we may be able to increase our membership largely by the next meeting of the State Association.

I should like to have a correct census made of the Number of Physicians actually practicing in the State, the kind of work they do, also those that are too old, or are retired, the number of ineligible and those that are eligible to join the medical association, the regulars and irregulars. I think that I will ask the Councilors of each district to get up the exact data required, through their County Secretaries, asking them to go to some trouble if necessary to obtain the data. Having been a Councilor myself I know that in many instances the information from the different counties does not check up properly. I would be glad if each Councilor, Secretary and member of the South Carolina Medical Association, try to aid us in every way possible to get up the correct data, so that we may know how to proceed intelligently in the work of organization and increased membership, thereby giving us a bigger and better Association.

I had the pleasure in June of attending the meeting of the Newberry County Medical Society at their beautiful Newberry County Club. They were there from every County in the district. They had a fine spirit of friendly cooperation, and the program was excellent. One of the most delightful barbecues that has ever been my pleasure to attend was served in the spacious dining room of the Club. Those physicians do entertain handsomely besides being up to date doctors.

Last month I attended a meeting of the Darlington County Medical Society at Hartsville. They met in the afternoon and a splendid supper was served at the Hotel. Good papers were read, and discussed, every one taking an active part in the discussions. All local talent.

On September 12th I attended the Seventh District Medical Meeting at Sumter. They met in the Junior School Building, one of Sumters numerous and beautiful school buildings. The meeting was largely attended. They had a wonderful program. There were many distinguished guests from other States who read papers or talked on Medical subjects. The subjects discussed were of great importance and one could not help being impressed with the characters of the papers and the thorough and efficient manner in which they were rendered. They also served a fine dinner at the Hotel and finished the meeting there.

I hope to attend and enjoy many more meetings during the year in the various districts and I want to stress the fact that Organization (more members) is an important necessity of our Association, and the many and varied conditions that come before us can not be handled effectively unless we have strength and cooperation.

ORIGINAL ARTICLES

THE PHYSIOLOGY OF THE KIDNEY WITH SOME CLINICAL APPLICATIONS

By J. Van de Erve, M. D., Charleston, S. C.

The kidney writes the last chapter in the history of body metabolism.

In the body economy, spite of the tragic abuse to which, in common with all the vital organs, it is gratuitously subjected, it plays its part with a dexterity that is surprising and an ingenuity little less than amazing. It ranks next to the brain and the liver in versatility of its adaptive work, in the cleverness of its correlative activities, in its sensitiveness and facile response to the metabolic needs of the individual organs and the organism as a whole.

The highly specific office assigned to it demands a highly specialized architecture, and the great Architect of the Universe laid down on his trestle-board a design that is as simple and elegant structurally as it is characteristically capable functionally.

Its architectural uniqueness is initially emphasized in its embryological derivation. For it develops, not from the endoderm as do the body's secreting glands, but from the mesoderm, from the surface of the coelome.

In no other organ of the body is our interpretation of its functions so dependent on an intimate knowledge of its histological structure as in the kidney.

For the purpose of this paper it suffices to call attention only to the gross and microscopic anatomy of the uriniferous or renal tubule, its blood and lymph supply, and its innervation.

The renal tubule begins in the cortex as a blind dilated extremity, called Bowman's capsule (after the man who first accurately described its structure in 1840). This capsule is invaginated so that it forms a hollow sphere completely enveloping the glomerulus, which will be described presently.

The capsule is made up of two exceedingly thin walls—one closely investing the glomerulus and dipping into its interstices. Between these two walls is a microscopically minute potential space, draining its contents into a short neck, connecting it with the proximal convoluted tubule.

The proximal convoluted tubule, in a much twisted course, winds its devious, snake-like way through the cortex until it suddenly and sharply straightens out and descends into the medullary portion, where, even more sharply, it bends on itself in a hairpin curve and then in a straight line ascends back into the cortex. Beyond this U-shaped part of the renal tubule, its limbs respectively known as the descending and ascending loops of Henle, the tubule assumes once more the characteristic structure of the proximal convoluted tubule and is, therefore, aptly styled the distal convoluted tubule.

The distal convoluted tubule, all of which, is located in the cortex, goes via the junctional tubule, through the boundary zone into the medulla and empties its contents into a collecting tubule, which in turn, with other thousands, pour their secretions into the ducts of Bellini and finally into the pelvis and the ureter which conveys the finished urine into the bladder.

The differing histology of the various portions of the renal tubule suggests their markedly differing functions. The whole tubule consists of epithelium lying on a basement membrane.

The inner wall of Bowman's capsule is lined by a syncytium of extremely thin and very flat —the outer, somewhat thicker wall, of delicate, moderately flattened endothelium.

The convoluted tubules, both proximal and distal, have walls of cubical epithelium. The cell boundaries here are indistinct, but the cell contents show a very prominent and peculiar arrangement—the so called "rodded epithelium" first seen by Heidenhain, a radial disposition or parallel rows of granules, vertical to

*Read before the South Carolina Medical Association, May 9, 1929, Charleston, S. C.

the basement membrane, and fading out as they approach the lumen, and projecting into it in the form of hairs or cilia apparently immobile, resembling like structures on the intestinal villi. Besides the granules, disposed in rows, there are other granules, particularly around the nucleus and toward the lumenal border, some of protein and some of fatty composition. Watery vacuoles also occur.

The wall of the descending loop of Henle is of flattened epithelium, leaving room for a relatively large lumen; while the lining of the ascending loop is constructed of cuboidal cells allowing space for a rather small lumen.

The collecting tubules and ducts of Bellini are made up of cubical cells, with clear protoplasm.

Careful measurement calculates the size of the renal tubule to be about 3 c. m. for its entire length, with a lumen varying from 20 to 60 microns. The diameter of the glomerulus, resting, runs about 90, and, active, about 100 microns. The diameter of the capsule when inactive is near 95, during diuresis as much as 125 microns, with a corresponding variation in the width of the capsular space ranging from 2 to 25 microns. Of much importance, considering the vast amount of work done by the renal tubules, is their number. This, from reliable histological and mathematical data, is determined to be about 9,000,000 for the two kidneys.

Excluding the adrenal, thyroid, and salivary glands, the blood supply from the kidney is larger than from any other organ in the body. It is estimated as 100 m. l. per minute for each 100 gram of kidney substance.

The volumetric distribution of blood to the different parts of the kidney, especially the renal tubule, is exceptionally significant.

The renal artery, short and issuing directly from the aorta on entering the hilus divides at once into 4 or 5 branches alongside the pyramid to the boundary zone, situated between the cortex and medulla. There they unite to form arterial arches—downward into the medulla go the parallel arteriae rectae to supply the loops of Henle and the collecting tubules; upward, into the cortex, pass the interlobular arteries to supply the glomeruli and convoluted tubules.

Each kidney tubule has three separate capillary supplies—one via the arteriae rectae to the loops of Henle and collecting tubules, and then through the venulae and the venae rectae into the venous arches on to the renal veins, one by the way of the interlobular arteries to the glomeruli; and one from the glomerular vas-efferens, which breaks up into capillaries surrounding the proximal and distal convoluted tubules, from which the blood flows into venae stellatae and eventually into the renal veins.

Let it be emphasized that each glomerulus is essentially a tangled tuft of non-anastomosing capillary divisions of the vas-afferentia, arising from the interlobular artery and these capillary divisions unite to form the vas-efferens. This vas-efferens makes its way, and thus becomes, so to say, the vas-afferentia to the convoluted tubules.

It is even more important to note the striking fact that the afferent glomerular arteriole is larger in diameter than arterioles usually are; and what is still more significant the efferent vessel is only 2/3 the diameter, but 3 to 10 times the length of the afferent one—a very unusual arteriole-capillary-venule sequence, the venules always being markedly larger in caliber than the corresponding arterioles. But then the vas-efferens is not a venule. It were more correct to call it an arteriole.

Both the afferent and efferent glomerular vessels have thick muscular coats.

The lymph capillaries, as elsewhere closed at one end, intimately surround the convoluted tubules and convey all the waste material of kidney cell metabolism into thoracic duct.

The innervation of the kidney is from the thoracic sympathetic: 6—12, and from the vagus, forming a renal plexus arranged around the renal artery and on the walls of the pelvis, from which the fibers ramify and are distributed to all the blood vessels, including the capillaries, especially to the glomerular portion, and to the capillary area around the tubule. Some fibers can be traced to the tubular epithelium.

The vasomotor nerves are mainly of the constrictor type, but the dilator kind are also present, particularly to the capillaries.

To visulize the structure of the kidney the

accompanying diagrams and actual histological photographs are submitted.

The renal tubule is the functional unit of the kidney, and it is conceded by all investigators that the Malphigian corpuscle usually referred to as the glomerulus (though it really consists of Bowman's capsule plus the glomerulus or tuft of capillaries) along with the proximal and distal tubules are the functionally important portions.

The junctional and collecting tubules are commonly conceived to have no other duty than that of conveying the formed urine via the ureter to the bladder.

Recent research, however, seems to have established the fact that the muscular spiralis papillae, an anatomic and physiologic entity, rhythmically contracts, and, by creating negative pressure in the calyx and also in the main ductus urinarius, inaugurates periodic suction (every 30 seconds) on the papillary duct, thus milking the renal papilla. On this finding the urine does not drip out of each papilla because of a vis-a-tergo blood pressure but by an active suction established by the contraction of this spiral papillary muscle.

The loops of Henle undoubtedly do more than merely carry the urine from proximal to distal tubules. They serve, particularly the ascending limb, which as stated above has a relatively small lumen, to equalize the fluid pressure in the renal tubule. And the variability in their length is very probably related to the varying size of the capsular lumina, i. e. the unequal distance of the outer or parietal from the inner or visceral wall of the capsule around the glomerulus. The lumenal size of the loops moreover explains the formation of casts since it is in this part of the renal tubule that the urine meets with greatest resistance in its onward flow.

The theories of urine formation, therefore, are limited to a discussion of glomerulus and tubule activities.

With all the facilities of micro-manipulation available today, we are far from a final solution of this problem.

Boiled down there are four theories attempting to account for production of urine and the various roles assigned to glomeruli and the convoluted tubules.

1. Bowman, in 1844, later vigorously supported by Heidenhain, promulgated the vital theory, contending that all the urinary constituents are secreted by the vital activity of capsular and tubular epithelium—the former forming the water and easily diffusible salts, the latter adding the organic and certain inorganic salts.

2. Ludwig, about the same time, advanced what is known as the physical or mechanical theory—the glomerulus, by a filtration process, filling the capsule and tubules with a very dilute urine, the tubules by a physico-chemical or osmotic process concentrating this urine.

3. Cushny, in 1917, after painstaking study of the problem and much original investigation, presented a theory accepting in their entirety Ludwig's conclusions so far as the work of the glomerulus is concerned, but postulated an active absorptive function, similar to the intestinal villi, inherent in the epithelium of the tubules.

Cushny speaks of threshold and non-threshold substances. The threshold constituents of the capsular fluids are those salts which are still useful to the body economy, such as sugar, chlorides, etc., which are returned to the blood in and by the convoluted tubules.

The non-threshold ingredients of the capsular filtrate are purely waste products, are valueless or actually harmful to the body economy, and must be eliminated, such as, urea, the sulphates, creatinine, etc.

4. The most acceptable theory, held by the majority of physiologists, is a modification of Cushny's, and is based on the work of many, prominent among whom are the teamworkers Nash and Benedict, Marshall and Crane, Wearn and Richards, Starling and Verney and a host of others.

This theory I will outline because I believe it to be the most physiologically representative and factually physiological.

Before we pass on let us summarize the functions of the kidney and stress the fact that its most important work is not the formation and elimination of urine. That usually monopolizes the discussion of kidney physiology.

The first and foremost function of the kidney is:

1. (a) The maintenance of an optimum

concentration of the plasma constitutents adjusted momentarily to the varying needs of the organs and the organisms.

(b) With delicate discrimination the kidney keeps constant the blood volume.

(c) And efficiently cooperates with the lungs to stabilize blood reaction.

(d) It regulates osmotic pressure relations in the body tissues, through blood and lymph.

(e) And it forms and synthesizes several of the urinary constitutents, such as ammonia, hippuric acid, etc.

II. Secondly or secondarily, it eliminates

(a) Waste products.

(b) Basic non-volatile acids.

(c) Toxic substances.

A thorough review of kidney functions unmistakably accents the fact that its *secretory* capacity outranks and outweighs its *excretory* activity.

The net result of all the work done in and by the renal tubule is brought about by three intricately interwoven and mutually adjustive processes.

1. Filtration in glomerulus.
2. Differential absorption of threshold substances in convoluted tubules.
3. Secretion and synthesis by convoluted tubule cells of excretory uninary constituents, toxins, etc.

Function of Glomerulus

The view obtains, from which few dissent, that the sole function of the Malphigian corpuscle is the separation, by filtration, of a fluid from the blood containing all the substances found in blood plasma with the exception of its colloid content, phosphatides, and certain tubular synthetic compounds.

Wearn and Richards, also White and Schmitt, have succeeded in thrusting micropipetes as small as 10 to 20 microns into Bowman's capsule, and have by micro-chemical methods analyzed the glomerular transudate and found it to be identical with the blood plasma minus proteins, phosphatides and allied compounds.

The factors that influence the amount and chemical composition of the filtrate are:

1. The number of active glomeruli.
2. The hydrostatic blood pressure due to cardiac contraction.
3. The variations in the size of the blood vessels, the vasae afferentiae and the capillaries of the glomerulus.
4. The osmotic pressure of substances left behind in the blood.
5. The resistance of the filtering membranes.
6. The back pressure of the filtrate.

6. Taking these up in reverse order we find that the back pressure, if not negligible by reason of the action of Henle loops and the ureteral muscle mentioned above, still is of small moment, because the filtrate is constantly and fairly rapidly removed.

5. The filtering membranes, i. e. the walls of the capillaries and the inner reflection over the glomerulus of Bowman's capsule are extraordinarily thin and porous, and easily pass all the plasma constituents except the protein molecules, which are too large to go through.

4. The blood plasma in the glomerular capillaries, after all its constituents except the colloids have been filtered into the capsule, has an osmotic pressure between 20 and 30 m.m. of Hg. In harmony with these findings is the observation that filtration ceases when blood pressure falls below this figure, unless the blood is plethorically diluted and thus the effective O. P. of the colloids, because of their low percentage presence, is diminished. This percentage may, through dilution, fall to such extent that a blood pressure of 18 min. Hg. may still form urine filtrate in the glomeruli.

It is perfectly evident that back pressure from ureter or blocking of any part of tubule must rise to a figure higher than the O. P. of the non-filterable substances within the glomerular capillaries, a fact of considerable clinical significance.

3. Very extensive is the range of varying the lumen of the glomerular vessels, directly effecting the amount of blood flow, and, therefore, the capsular filtrate. Constriction of the short and large afferent arteriole, of course, decreases the blood flow through the glomerulus very markedly and, parri passu, reduces the rapidity of filtration.

Constriction of the long and much smaller efferent vessel, retards the outflow, raises glomerular pressure, and favors filtration.

Dilatation of the afferent vessel increases the

volumetric flow of the blood into glomerulus, raises capillary pressure, and filtration becomes freer.

Dilatation of the vas-efferens permits the easy escape of blood from glomerulus, and, therefore, lowers pressure and diminishes filtration.

Richards, on good ground, asserts that the vas-efferentia is far more responsive to vaso-constrictor impulses than the vas-afferentia, so that weak stimuli, nervous or chemical, only effect the former, augmenting filtration; while strong stimuli constrict both, and, it follows, reduces filtration.

Strangely enough this relative sensitiveness to dilator stimuli, if chemical in origin, does not have the opposite effect. This is noteworthy but easily explained because the chemically active dilator ingredients of the blood promptly pass out into the glomerular transudate and, therefore, do not reach the vas-efferens in sufficient concentration to dilate it. For this reason chemical dilators both weak and strong, conspicuously favor urine formation.

The capillaries responding to nerve stimuli, to hormones, and chemicals in the blood assume perhaps the major burden of sizal adjustment for increasing and diminishing blood flow, and, therefore, local pressure variations in the glomeruli.

2. Blood pressure minus protein O. P. constitutes the effective filtration force. It is probably always below 50 to 60 m. m. Hg., but even so, is two or three times as much as in any other capillary area of the blood.

Filtration pressure may be expressed in the formula: F. P.=(p.—O. P.) P. here is the blood pressure in the glomerulus, p the pressure of urine in the capsular end of the uriniferous tubule, and O. P. the osmotic pressure of the plasma colloids.

The determining factor P may be increased in several ways: By increasing the force of cardiac contraction, or by a generalized vaso-constriction, or by occlusion of the renal vein.

Just as the fibers of any given muscle do not all take part in the usual contraction and only a certain number, to do the work required, contract, and also rotate in long continued action (a finely balanced economic affort) so, it is now definitely established, normally only a certain portion of the glomeruli function simultaneously, and often only a part of an individual glomerulus is active. The variation is very extensive and no percentage can be set down, but as a rule only 1 out of 5 functions under normal condition.

Adrenalin and pituitrin close active glomeruli so that few continue to filter.

Diuretics, such as caffeine and urea, open up, by dilatation, large numbers of glomeruli—in some cases all of them.

The easy inference from this is the variation produced in the quantity without affecting the quality or composition of the urine.

Functions of Tubules

The bulk of the work done by the kidney is shouldered by the convoluted tubules.

Why there should be a double set to each renal unit has never been explained. They do apparently the same work.

I am inclined to think the proximal convoluted tubules do the major portion of the work. They have a better blood supply, under somewhat higher pressure.

The distal tubule completes the process to the extent needed.

The loops of Henle favor the longer sojourn of glomerular transudate in the proximal tubule.

And it may well be the constantly active milking muscles of the papillae (spoken of above) by active contraction, hurry evacuation of tubule content or through inactivity favor retention.

The much discussed reno-renal and vesico-renal reflexes may find anatomic explanation and physiologic expression in the action of this muscle.

Its paralysis might well account for post-operative reflex anuria. Its over and under functioning certainly would markedly affect urinary flow from the tubules, reabsorption of threshold substances, and retention of waste material in the flow.

The selective absorption of threshold substances is not primarily intended to concentrate the urine, but to return to the blood, which leaves the glomerulus as a concentrated

solution of plasma colloids, the optimal percentage of all the plasma constituents.

The differential absorption of water is perhaps the most important and the most spectacular.

First, to keep the body water content uniform, the convoluted tubules must take from the filtrate the amount needed in blood and lymph and tissue fluid.

Second, there is an obligate volume of water necessary to hold the crystalloid urinary substances in electrolytic balance with the blood—about .9% molecular concentration.

Much of the reabsorption of water may be accounted for osmotically. The laws of osmotic pressure, however, though they explain satisfactorily the reabsorption of water when the body is in water equilibrium, fail to account for absorptive failure in over-ingestion of water.

The elimination of excess water in urine is very exactly quantitative. In conditions of water equilibrium as little as 150 cc. ingested, increases by that amount the volume of urine.

Excessive intake of water may increase the volume 15 to 30 times the normal. Here osmosis is not equal to the task.

And it is for such a time as this that pituitrin comes into its kingdom. To this hormone (postpituitary) is assigned a twofold and antagonistic influence on urine formation. It has the power both of increasing and decreasing it. In the glomeruli it acts as a weak vasoconstrictor causing contraction of the vas-efferens, therefore, heightened pressure in the glomerular capillaries, and so augmented filtration. If, now, absorption is unaltered diueresis ensues.

In the tubules postpituitary secretions act as a specific stimulus to epithelial cell activity especially directed toward effective absorption of water from the filtrate and returning it to the blood.

In diabetes insipidus, quite certainly due to non-absorption of water on the one hand and too large a number of active glomeruli on the other, this hormone almost magically reduces the amount of urinary output.

The other threshold substances returned to the blood, if not too concentrated in the filtrate, are the following:

Glucose, below .17%. Its concentration in blood is .1—.12%, so that ordinarily there is no sugar wastage unless the sugar invasion of the blood rises above .17%, or a much more common disturbance, the insulin functions ineffectively.

Phloridzin doubtlessly paralyzes tubule ability to absorb sugar from the glomerular filtrate and allows it to escape in the urine.

The reabsorption of the chlorides is a problem not definitely settled. The plasma content of NaCl is about .6% and the threshold for reabsorption by the tubules, it might be inferred, would be that figure. But this is not always the case.

With a salt-free diet, salt practically disappears within a week from the urine, because all the filtrate is reabsorbed. But strangely enough, if, now, caffeine is administered salt reappears in the urine. The caffeine probably paralyzes reabsorption of salt by the tubules. This, in turn, by its O. P. prevents, to some extent, the reabsorption of water and a measure of diuresis ensues.

This action of caffeine makes it an excellent diuretic in renal edema in which water and salt retention occurs.

Pituitrin also diminishes salt reabsorption but seems normally necessary to stimulate tubule epithelium to reabsorb water, and undoubtedly its stimulus to water reabsorption is far more efficient than its salt retention effect.

In starvation, occurring in many wasting diseases, salt elimination by the kidney is far higher than in a salt free diet, due to the salt in the tissue cell wastage, which needs to be thrown out to keep the O. P. of the body fluid constant.

With increased salt ingestion, the adjustment of outgo decidedly lags for a few days, probably because, as Patdberg has shown, the salt is largely deposited in the skin. But during the excess elimination of NaCl in the urine its concentration in the blood may be normal.

There is no doubt that salt intake can be reduced without harm. Carnivorous animals and races like the early Indians or better Eskimos, dominantly carnivorous, do not experience salt hunger; but herbivorous animals, because the vegetables, especially potatoes, contain a large percentage of K salts, need much

more Na than their food supplies, the K, as Bunge has shown, preventing the reabsorption of NaCl.

While in the normal individual salt reabsorption follows the bloodlevel, in the kidney diseases its reabsorption is much enhanced. This is known as the threshold of chloride excretion. In pneumonia and rheumatic fever NaCl reabsorption is almost complete.

Amino acid reabsorption is about .005% below its percentage in the blood. Their facile deamination by the liver and the kidney keeps down their concentration in the blood.

The secretory power of the kidney, and its synthetic capacity largely concern the non-threshold substances; urea, creatinine, potassium and ammonium sulphates and phosphates, purin bodies, toxins, dyes, etc.

It has not been proven definitely that the tubule epithelium secretes urea, uric acid, sulphates and phosphates.

That reabsorption and concentration is not a purely physical process, osmotic in character, is easily evident if it is remembered that the O. P. of the glomerular filtrate is very considerably higher than that of the blood in the capillaries surrounding the tubules. The delta of blood is .56°C. that of urine 1 degree to 2.5 degree or even 5°C.

The tubules must, therefore, do much work. Their O consumption proves that too.

Moreover the selective absorption, the tubular epithelium exercises, reinforces this proof. The rate of urea, sulphate, and phosphates elimination is accurately proportioned to their bloodlevel percentage and wholly independent of their concentration in the urine.

This means that the tubules concentrate certain substances in the filtrate extensively and certain others only meagerly or not at all—a selective action prompted by blood concentrations that bespeaks a vital activity of tubule epithelium of a very delicate, responsive and adaptive character.

The normal urea output is 25—30 grams per day. Since the blood urea averages .03%, it must take 100 liters of plasma filtrate, and since, on an average, only 1500 cc. of urine is voided each 24 hours, 98.5 liters must be reabsorbed and the concentration of urea affected must be between 65 and 70 times (2% divided by .03%).

Cushny's table modified and brought up to date, exhibits at a glance this concentration power of the tubules.

	% in Blood	% in Urine	Concentrated
Water	90—93	95	------
Proteins, fats, colloids	7—9	trace	------
Dextrose	.1	trace	------
Urea	.03	2.	70
Uric Acid	.002	.05	25
Creatinine	.001	.075	75
Na	.32	.35	1.
K	.02	.15	7
Ca	.008	.015	2
Mg	.0025	.006	2.4
Cl	.37	.6	1.6
PO-4	.009	.27	30.
SO-4	.002	.18	90
NH-4	.001	.04	40

The syntheses performed by the tubules are these: 1. Hippuric acid from benzoic acid and glycocoll. Many fruits (cranberries e. g.) and vegetables contain the toxic benzoic acid, which thus detoxicated is at once eliminated. 2. Inorganic phosphates, hydrolyzed from organic hexose phosphate by phosphatase, an enzyme found in tubule cells. 3. Formation of ammonia from amino acids, to react with the sodium salts of fixed acids and thus eliminate the latter.

Amount of Urine

The urinary output and especially its percentage of solid constitutents varies enormously and depends *fluidwise* on the quantity of liquid ingested or eliminated by other channels, particularly the sweat glands; and *solidwise* on the concentration of solids in the food.

The amount of urine passed during the day is larger than at night. If more than half of the 24 hour's elimination is voided during the night renal disease may be definitely suggested.

Moreover the night urine has a higher percentage of solids than the day specimens. If this is not so, i. e. if analysis of day and night samples show no variation, renal pathology is explicitly indicated.

Mosenthal's table of specific gravities well illustrate these findings:

	Day						Night
	8—10	10—12	12—2	2—4	4—6	6—8	8—8
Normal	1.016	1.019	1.012	1.014	1.020	1.010	1.020
In hypertensive nephritis	1.010	1.009	1.010	1.009	1.009	1.010	1.009
In myocardial decompensation	1.018	1.020	1.019	1.018	1.020	1.021	1.022

Polyurias are caused by:

1. Increased glomular circulation.
2. Plethoric conditions of the blood.
3. Interference with reabsorption by the tubules.
4. Secretory activity of the tubules.

Pathologically polyuria may be brought about by:

1. Drugs and salts.

All substances that act as diuretics, e. g. caffeine acting on the glomeruli and directly on renal tubules; digitalis indirectly by its effect on the heart.

NaCl, if water is available, normally always produces diuresis. In certain forms of nephritis it may utterly fail as a diuretic, and may even diminish the quantity of urine and its chloride content.

2. In relieving edema polyuria occurs and is distinguished from the normal through its higher percentage of urea and salts.

3. In declining fevers, because often, at their height, spite of skin elimination, they make the blood more watery, diuresis results—comparable to relieving renal edema.

4. In renal disease when much tissue has been destroyed, the kidney's reabsorptive power is limited and frequently terminally polyuria ensues.

5. Injury to the floor of the 4th ventricle as Claude Bernard proved, occasions what is called NaCl diabetes because of its highly increased concentration in the urine.

6. In diabetes insipidus, whether due to a primary polydipsia or disturbed renal function, quite probably the latter, polyuria is symptomatic and is due to lack of water reabsorption by tubules and very probably is due to pituitary or brainstalk lesions.

Oliguria may be normal, as in much decreased water ingestion or in marked elimination of water by sweat glands and in feces.

Pathologically, the urine is decidedly lessened by:

1. Insufficient glomerular circulation due to heart disease—less blood, less filtrate, less urine.
2. Nephritis, secondary to heart disease or primary in kidney tissue.

Any marked swelling of the renal parenchyma, because of the kidney's unyielding capsule may interfere with renal circulation.

Renal decapsulation, once hailed as a surgical panacea, has fallen into disfavor because a new capsule forms rapidly.

In renal congestion the nourishment of renal cells, especially of the tubules, is severely restricted.

Albuminuria may be normal, as in violent exercise or exposure to cold, or when a foreign protein enters the body by other routes then per os, and usually promptly subsides.

Postural albuminuria, due to vascular changes in kidney on account of diminished pulse pressure or venous congestion, is characterized by albumin in day—but none in night urine, and is most common in adolescents, ages 15-21. Prognosis is good, most patients in later life become entirely well.

Albuminuria from circulatory disturbances, or, more commonly the nephroptic type is mostly serum albumin.

The former are caused by venous congestion in the kidney or cardiac decompensation; the latter by degenerative or inflammatory changes in the kidney tissue.

Space forbids consideration of nitrogenous and salt retention in nephritic conditions, though late work done throws much light on kidney pathology especially uremia.

*APLASTIC ANEMIA

By W. R. Mead, M. D., Florence, S. C.

Within the past few months practically every newspaper in the country has featured the appearance of a strange and terrible malady among the painters of luminous watch dials in a certain New Jersey factory. The news value of these articles lay, not in the amount of damages which the victims could collect, but in the relentless nature of the illness which doomed the unfortunate workers to certain death within a fairly short period of time. In a much less dramatic manner Ehrlich had called the attention of the medical profession to this same disease as far back as 1888.

Although the reported cases of true aplastic aemia are not numerically great, they constitute a considerable portion of any group of primary anemias. Three cases which have come under my care during the last five years will be mentioned, one of them in some detail, the others rather casually to illustrate certain points in the general discussion of the disease.

Aplastic anemia is sharply differentiated from all other forms of anemia in its pathogenesis, symptomatology, clinical course and response to treatment. All evidence points to an acute and rapidly progressive bone marrow failure as the cause of the characteristic symptom picture. This, in turn, may be the result of many known and unknown noxious agents. Benzol (1) was the first of the known agents recognized as possessing the ability to inaugurate progressive aplasia in bone marrow. The administration of neoarsphenamine and sulpharsphenamine has been attended in rare instances by the development of an aplastic anemia (3). In view of the benzene basis of both of these drugs, it is probable that their toxic action is in no way different from that of the parent substance. One of my cases illustrates this point:

A young tobacco buyer, 24 years of age, was admitted to the medical service complaining of bleeding from the gums. He had had a chancre eight years previously with inadequate treatment. Three and one-half months before his present symptoms appeared he had developed another initial lesion, but began intensive treatment with neosalvarsan at once. During the next two months he received sixteen doses of neosalvarsan intravenously without any rest period. Approximately five weeks after his last dose and fourteen weeks after his first dose, bleeding from the gums appeared. Aside from his buccal condition, his physical examination was essentially negative. His admission blood count showed 30% hemoglobin, 2,300,000 RBC, 4,150 WBC of which 44% were neutrophiles and 56% small lymphocytes. There were no regenerative forms of red cells. His bleeding time was 20 minutes. Seven transfusions in five weeks increased his hemoglobin to 65% and erythrocytes to 3,600,000 while his bleeding time was reduced to eight minutes and all bleeding from the gums had stopped. He left the hospital, began drinking heavily and finally died in a North Carolina hospital after receiving some sixteen more transfusions.

Excessive irradiation of the long bones results in a temporary anemia which is indistinguishable from a true aplastic anemia. Recovery follows unless, as in the New Jersey radium paint cases, the source of the destructive rays cannot be removed. Martland (4), who investigated these cases, believes that the aplastic anemia which so many of them developed arose from a destruction of the erythro-and leukopoeitic centers in bone marrow where the insoluble sulphates of radium and mesothorium were deposited after absorption through the alimentary tract. In this ideal location, and free of any screening effects of intervening tissues, these radioactive substances bombard the adjacent blood forming centers with highly destructive alpha rays for an indefinite time interval. One is tempted to pause too long over Martland's extremely suggestive observations because in these unfortunate victims of modern industry, the stage has been set for some fundamental studies on the whole question of blood formation.

Aside from the chemical and physical agents previously described, toxins of certain diseases are prone to cause changes in the blood indicative of widespread destruction of bone marrow. Such, for instance, was Menninger's (5) case of pneumonia in which the leukocyte count

*Read before the South Carolina Medical Association, Charleston, S. C., May 9, 1929.

ranged from 150 to 275 per cu. m. m. with 5% neutropils and 95% lymphocytes. The cases of agranulocytic angina which are being reported with increasing frequency (6) (7) (8) (9) show blood changes suggestively similar. Duke (14) mentions one case of aplastic anemia in an adult secondary to an enormously underdeveloped stomach which could receive only wholly inadequate amounts of nourishment.

All efforts to identify the cause for marrow aplasia are futile in a very large per cent of the cases of aplastic anemia. These constitute the true idiopathic cases of the disease. In such instances the most scrupulous care in history taking will fail to reveal any exposure to chemical, physical or biological agents or deficient nutrition which might cause the condition. Aside from offering a slightly more gloomy prognosis, if that is possible, the idiopathic cases of aplastic anemia differ in no respect from those resulting from some known toxic substance.

At necropsy the typical case of aplastic anemia shows bone marrow which is yellow, fatty or gelatinous gray with few normal cell elements or none at all. (10). Since it is inconceivable that any toxin can render the entire bone marrow completely aplastic at one time, it follows that the finding of a few small foci of normal or even hyperplastic marrow would not be incompatible with such a diagnosis (11) (12). Other organs show consistent or significant changes other than those incidental to extreme anemia. Such large depositis of hemosiderin in the liver as Smith (2) observed in his case are not in accord with findings of most pathologists who, therefore, do not accept these isolated instances as evidence of the hemolytic nature of this anemia.

On the clinical side, aplastic anemia presents an unmistakable and terrible picture. Occurring most frequently in early life—the second and third decades commonly in contradistinction to pernicious anemia—it is characterized by a rapid, non-remittent course, a pale gray skin instead of one showing slight icterus, a progressive decrease in all of the formed elements of the blood, varying degrees of fever, an absence of all abnormal forms of erythrocytes, and an early, marked hemorrhagic tendency (13). These features are well illustrated in the case report which concludes this paper. The onset of the disease is somewhat insidious, first attention being directed to it because of the rapidly increasing weakness, evidences of anemia or hemorrhage in the skin or from the mucous membranes. From onset to termination rarely more than a few weeks elapse. Physical examination reveals nothing more than the waxen complexion which is singularly free from the yellowish tint of skin or sclerae which marks those anemias characterized by blood destruction.

Blood examination shows significant changes in erythrocytes, leukocytes and platelets. The color index is only slightly reduced, averaging 0.8. There is pronounced reduction in the number of erythrocytes—one case which I treated showed a drop to 700,000 per cu. m. m. shortly before death—but the red cells are astonishingly normal in appearance. The absence of any suggestion of polychromatophilia, stippling, or changes in size and the failure to find nucleated erythrocytes on the smear or reticulocytes in vitally stained specimens may cause the unwary to be convinced that the process is not essentially a blood condition (15). A progressive leukopenia with most pronounced diminution of neutrophilic polymorphonuclears and complete disappearance of esoinophiles together with a relative but not absolute lymphocytosis constitute the significant changes among the white blood cells. One of my cases showed a reduction in leukocytes to 800 per cu. m. m., of which 80% were lymphocytes. I have seen the relative lymphocyte count as high as 95%. Minot gives the average as 70% (11). The platelets are decreased, often nearly absent. I was able to count only 2,400 in my worst case while the one described in detail below showed 50,000 per cu. m. m. The characteristic clotting phenomena which accompany any marked platelet reduction are found in this disease—a prolonged bleeding time, normal or slightly delayed coagulation time and non-retractile clot. The red cell fragility is likewise altered—they begin to break up in the same strength salt solution as normal but complete hemolysis occurs in a higher percentage of salt solution than normal (12).

If careful analysis of the blood findings has

not made the diagnosis obvious at the outset, the further progress of the case will soon add indisputable proof. During the early course of aplastic anemia, it is most often confused with idiopathic purpura hemorrhagica and must be differentiated from this condition since the question of splenectomy will come up at once. In contrast to purpura hemorrhagica, the anemia of aplastic anemia precedes hemorrhage because of the involvement of erythocyte and leukocyte centers before the parent cells of the platelets are attacked. The normal or elevated leukocyte count and the active response of bone marrow to transfusion further serve to distinguish purpura hemorrhagica.

From pernicious anemia a rather sharp differentiation is possible on the basis of the age of the patient, the more marked leukopenia in the aplastic form, the absence of glossitis, achylia and subacute combined cord sclerosis so characteristic of the pernicious variety, the failure of aplastic forms to respond to liver treatment or to exhibit evidences of blood destruction or to have spontaneous remissions; and, finally, on the basis of the wide variation in the bone marrow of the two conditions. The aleukemic phase of a leukemia simulates aplastic anemia except for the fact that in the former, immature cells of the lymphocyte group commonly reach the peripheral circulation while in the latter, practically all the lymphocytic cells are of the mature small lymphocyte variety. Ruling out pernicious anemia, purpura hemorrhagica and aleukemic leukemia, one must still think of the possibility of bone marrow tumors as multiple myelomata, easily distinguished by the X-ray, or hemophilia, where the number of blood platelets is normal.

Two of my cases presented themselves for treatment prior to the advent of liver therapy in anemia. Both of them died. I was extremely anxious to try liver in this fatal malady, and so lost no time in instituting this form of therapy on the third case, realizing however, that every theoretical consideration argued against its success. Sweeney (16) had used it in a case of aplastic anemia due to benzol poisoning to no avail, but, otherwise, the literature was devoid of reference to live in this disease. Diligent use of whole liver and the liver extract in my case resulted in no improvement. Martland (4) has since reported the unsuccessful use of both liver and its active fraction in secondary aplastic anemia. Duke's (14) case with the infantile stomach which responded to a diet rich in liver must be regarded as an isolated instance, the peculiar circumstances of which might never be duplicated. I know of no other instances where liver has been used in this disease. Apparently it has no therapeutic value here.

Transfusions offer a useful method of tiding over an emergency while a diagnosis is being reached. It is conceivable, in a case of aplastic anemia when the toxic agent has been discovered and removed, that repeated transfusions may support the body functions while the bone marrow gradually emerges from its degenerative state. This was the rationale of the repeated transfusions in the first case I described. Very little support for this sanguine belief can be gleaned from the literature. My experience with transfusions in the condition leads me to believe that as the disease advances, the toxemia is so overwhelming that the mere mechanical addition of whole blood to the circulation cannot possibly counteract it. Because of the desirability of doing something tangible, transfusions will continue to be employed in this disease, just as gastroenterostomies will continue to be used in hopeless malignant disease of the stomach.

Unlike most diseases, removal of the cause of aplastic anemia rarely results in an arrest of its progress. Furthermore, it is most hazardous to undertake any surgical procedure, such as tonsillectomy, dental extractions or uterine packing. With pronounced leukocyte reduction, as obtains in these cases, a simple procedure, such as one of the above, may superimpose the picture of profound sepsis on one of a rapidly fatal anemia and thus intensify the horror of the inevitable exitus.

The following case is presented as typifying the classical features of a case of aplastic anemia:

A twelve year old girl was referred to the medical service with a history of six years progressive illness, the first symptom of which was an extremely foul breath. Following this she developed a sore throat and high fever. The family physician described the condition as be-

ing the most unusual throat he had ever seen—the tonsils were swollen, ulcerated and had a distinctly purplish hue. Recovering from the severe throat symptoms, the child began to bleed slightly from the gums. She grew paler and more listless; she would tire easily. A few days before her admission to the hospital purpuric spots appeared over the lower legs and in the buccal cavity. Her past history was quite devoid of significance. Her admission examination revealed no lymphadenopathy; the liver and spleen were not palpable. She had a waxen complexion and her sclerae were the color of skimmed milk. Positive findings were limited to the skin and mucous membranes, which were the seat of miliary purpuric hemorrhages. Tourniquet test was positive. Blood examination on admission showed 32% hemoglobin, 1,530,000 erythrocytes, 3,200 leukocytes of which only 27% were neutrophils and 71% were mature small lymphocytes. Her platelets numbered less than 50,000. The bleeding time was three minutes, clotting time four minutes. After two transfusions, totaling 900 cc., her hemoglobin had risen to 40%, the red cells to 2,690,000, but the leukocytes had dropped to 2,800 with 15% neutrophils and 80% lymphocytes. Liver diet was begun at this point, but within a week bleeding from the gums became so severe that another series of three transfusions, totaling 1200 cc., becáme necessary. Frequent blood examinations thruout this interval revealed a gradually rising hemoglobin and erythrocyte count with a stationary leukocyte count and mounting percentage of mature lymphocytes to the point where they constituted 95% of the total leukocyte count and no abnormal red cells.

At this point the child was sent to the Barker Clinic in Baltimore where a confimation of the diagnosis of aplastic anemia was obtained. The hematologist reported the finding of no immature or abnormal red cells and only one immature leukocyte. Returning home the child again began to bleed from the gums, later also from the kidneys despite three more transfusions which raised her erythrocyte count to 3,330,000 and hemoglobin to 43%. Having given the child 1500 cc. of blood in these last three transfusions without the slightest benefit, and with no evident result from the diligent use of liver extract which had been started in Baltimore, with the consent of the parents I determined to stop both lines of treatment. Three days later the child died, six weeks after coming under my observation.

A section of the femur was removed for examination. It was yellow with a few pinkish islands. Dr. Lynch's report on the microscopic appearance of the marrow is as follows: "Microscopically . . . . . the marrow exhibits small areas of cellular content, the cells being mainly lymphoid, however, with a few of the polynuclear order and an occasional nucleated red. Otherwise, the marrow is entirely fatty."

Summary

In the foregoing an attempt has been made to describe a very fatal form of anemia, occasionally secondary to some known toxic agent but more often idiopathic. The usual pathology has been discussed as well as the chief clinical features which distinguish this type of anemia from related blood dyscrasias. The futility of all forms of treatment has been emphasized. The clinical record of one case with pathological findings has been appended.

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PEDIATRICS

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It has been requested by our Editor-in-Chief that a report be given to this Journal of a recent visit to some of the leading medical centers of Europe. Of course observations made from a few months stay cannot be as comprehensive as those covering several years; and also while the facts may be correct yet often ones impressions are not equally reliable. All sorts of factors influence our judgment of places and people. Weather, health, food, company, etc., all count.

When our country was younger in the days when medical colleges were very inadequate, and the educated classes had more wealth, it was the rule for young graduates to spend a year or more abroad in pursuit of knowledge. It was felt that contact with the older world had a broadening influence that was beneficial. Latterly, however, the impression has grown that America having made such marked advances in the industrial arts and in applied sciences, especially medicine, that it was unnecessary and perhaps foolish to cross the Atlantic, in quest of further learning. Nevertheless, our medical journals constantly contain proof of the industry and ability of our brethren across the sea.

About the middle of May our ship left New York City. The nine day voyage was so delightful that the time was too brief. Arriving at Naples an opportunity was afforded to view one of the most beautiful of all harbors. After a few days in Naples and its environs a visit was made to Rome. This majestic city contains not only many well preserved monuments of antiquity but magnificent modern structures. The city is large and very cosmopolitan. To see it as it should be would require many weeks. One obtains from it, in great measure, what he carries to it. That is the student of antiquity and of art acquires far more in a short time, than the average uncultured tourist, to whose ears the names of famous men of a past day, mean nothing.

Inasmuch as we in America are unfamiliar with the Italian language we are uninformed as to the progress that is today being made in Medicine in the land ruled by Mussolini. Some few of us may recall that it was at Salerno and Padua in the Middle Ages that doctors obtained their training. Today throughout Italy there are many excellent medical schools and hospitals. We were quite fortunate in that we were shown through the Policlinico at Rome. This is a large modern general hospital of 800 beds. The laboratories of chemistry, bacteriology, pathology, etc., are all that one could wish. Next we spent over an hour going all over the new pediatric hospital. The director Professor Spolverini happened to be present, so that we saw not only beds, and wards, but the charts and the patients. If in this state we had a children's hospital one tenth as good we would be proud.

In fact throughout Europe much is being done for the child.

After seeing some of the points of interest and getting steeped in the art and history of Rome, Florence and Venice, we journeyed through some beautiful mountain country all day, reaching the large and handsome ancient city of Vienna at night. Vienna should mean much to all medical men, for there it was that most of our earlier specialists, and some of our eminent present ones laid the foundation for their medical work. To a doctor this metropolis with its many large hospitals and allied institutions offers much that is of interest and of great value. Further to the sociologist it is worthy of study. Then too the presence of the Am. Med. Assn. of Vienna which is a link between the student and the professor is very helpful. Over 550 courses in medicine are offered. There are over 250 instructors. The courses are well conducted and not expensive. Of course no one can expect in Vienna or elsewhere to obtain something for nothing. It was my good fortune to make rounds several times at the Pirquet Clinic which may be taken as a Pediatric model, and also at the Karolina Kinderpital (Childrens Hospital). The wards are clean and well lighted and the patients well cared for. The cubicle system is used. The charts while not too voluminous contained everything that one could ask for. The professors in making the visit spent hours at the bedside, talking with the residents, interns, and consultants about each case as though time were nothing. Of course, as the Visiting Physician is paid by the state he can better afford than an American to spend much of his day in the hospital. But aside from that thoroughness seems to be inborn in the Vienna doctor.

As yet no one has been appointed to fill the chair of the lamented and incomparable von Pirquet. However, Prof. Knoepfelmacher, Prof. Noble, Dr. Wagner, and others are carrying on. It was my privilege to attend several clinical lectures of Dr. Noble. The work was in German; but so clear and simply expressed that it was easy to follow. His teachings on diarrhea and vomiting are very much the same as those of the leaders in America. His cases and radiograms of rickets and scurvy were very interesting. In Vienna and in Germany excellent radiographic work is done and the films projected on the screen are utilized at most lectures. The lecture room is large and often there are from 200 to 300 students in attendance; in addition to the assistants, internes, nurses, technicians, etc., The students come from many places in foreign lands, such as Czecho-Slovakia, Poland, Hungary, Russia, etc. Contrary to what I had heard the instructors are very kind and attentive to the patients, and in their remarks to the students while earnest and serious, yet are sympathetic and intersperse quite a bit of wit. There are very many hospitals in Vienna, some new, the majority old. The best known is the Allgemeines Krankeshaus (general hospital) which has 5,000 beds.

It is a veritable city with parks, streets and monuments to many departed medical leaders. The buildings are separate and distinct according to medicine, surgery, etc. The streets are all labeled and arrows and signs indicate the way. Nevertheless one gets lost very easily. One morning early I had the pleasure of attending a clinical lecture by Prof. Chvostek. He showed but a few cases, but discussed them well, making the hour pass very pleasantly. Here it might be noted that while one can obtain instruction through the A. M. A. of Vienna without a knowledge of German, yet it is far better to be able to understand that language. This fact is attested to by the large number of persons there who teach German, and who advertise to teach medical German. In the neighborhood of the Allgermeine's Krankenhaus and the headquarters of the A. M. A., there are all sorts of boarding houses, medical bookstores, and tutors. The Jubilaumspital is a new hospital which houses only 2,000 patients, but it is conjoined to the Old Folks home on the same grounds, which has a capacity of 7,000. Professor Erdheim, who is a pathogist of renown has the entire pathologic material from these places at his disposal. One afternoon I attended his lecture. It was to me an eye-opener, for I had no idea that one ever went into the subject so fully. His exhibits were well prepared and his remarks most instructive. Before the pathology was discussed a resume of the clinical course was given.

In addition to medicine in Vienna one enjoys

excellent music, opera, and other varied attractions. The cafes are good, and the people all are very kind and courteous, especially to Americans.

Next a tour through six of the representative German cities was undertaken. Munich is a large modern beautiful city of about a million people. Art and science are well represented. The Deutsches Museum is the finest thing of its kind in the world. While in the city I visited the Childrens Hospital and later on returned to hear Professor Pfaundler give his lecture. It was well worth the time and trouble. That distinguished doctor kept his students attention and gave them valuable instruction. Dr. Pfaundler is not only a clinician and research worker, but a writer of distinction. He is doubtless best known to many of us as a joint author of the pediatric work entitled Pfaundler & Sclossman's Diseases of Children. His latest contribution has been on the effect of nervonal in chorea.

After leaving Munich or Munchen (as the Germans call it) a brief visit in three other interesting cities was made before Berlin was reached on the 21 of June. There we joined the European Assemblies of the Interstate Post Graduate Medical Association of North America. Berlin is a huge modern city. A regular program was arranged day by day at set hours at the Charite and other hospitals. So much of the time was spent at clinics that aside from a trip to beautiful and historic Potsdam little was seen of the city. The most interesting figure to me was that of Prof. Czerny. His lectures were clear cut, worthwhile and well attended. He has done some remarkable feeding experiments, which were briefly reviewed. Then too he is testing out the safety and efficiency of a new drug for use in hereditary lues. This remedy is given by mouth. So far it sounds promising. Professor Von Bergmann gave a resume of his investigation clinically and radiographically of gastritis. His associate spent over an hour reviewing some of the recent work on diseases of the intestine. The radiograms exhibited were very fine. The famous Professor Lubarsch exhibited before us a large number of pathological specimens. These were wet preparation in the gross which were thrown on the screen and then discussed after a reading of the clinical history. Berlin as a medical center ranks with or perhaps in some respects above Vienna. But in Berlin all the work is given in German and there is no intermediary medical association. Further the city to me seemed to lack the charm and gemuethlickeit of the smaller but more picturesque Vienna.

Our party of American doctors then journeyed to Frankfort on the Main (river.) This medium size City is an old historic and handsome place. It has a university and is a center of great culture. At the Medical School which is in a park with many pretty buildings we had a regular program of clinics and lectures the three days of our stay. The chief medical figure (in my opinion) is that of Professor Volhard. He is a well known authority on the kidneys and the heart. Wherever nephritis is investigated his work is known as fundamental. He exhibited many models of the heart showing different lesions. In the wards of the hospital there were about 60 cases with different types of nephritis. Professor Von Mettenheim gave a clinical lecture in Pediatrics. Several rare conditions were shown, and some fine photographs and radiograms exhibited. It would be well for one having the time to spend months at Frankfort learning medicine. Some of those interested in Surgery, saw some excellent work done there by Prof. Schmieden. He must be a man of great knowledge, and in addition he possesses speed and good technique. At Frankfort there is an institute where much physical therapy is given. Radium emanations are particularly used there in medical conditions. One afternoon we spent at Bad Homburg. This is a sanitarium of great size and beauty, which is in a very large park. It is patronized by a wealthy clientele from many lands.

Our next stop was at Paris. One is very apt to forget the pursuit of medical science when surrounded by all the distractions of this fair city, but for those who have the will to seek it, it is there in abundance. To an American the American Hospital stands out as an oasis in this foreign land. It is a monument to what the people of the United States have done, and is greatly appreciated by the French medical people. There we had several clinics and talks.

Prof. Bernard had much to say about his treatment of tuberculosis with gold and sodium thiosulphate. His claims were modest, but he seemed positive that it is a method of value. Then our American Dr. Plotz told of some remarkable new work that is being done along the lines of immunization in typhoid, in cholera and in dysentery. Following this there was a reception on the roof of the hospital. This was well attended. From the roof an excellent view was had of Paris. Paris has great beauty. One of the greatest medical treats was a visit to the Pasteur Institute. We spent a while at Pasteur's tomb. It is inspiring to there see on the walls in mosaic a recapitulation of this great scientist's many and beneficent conquests of disease. To the doctor at least, his tomb is more impressive, than that of Napoleon's. At the very old Hotel Dieu and the Hospital des Enfants Malades we had lectures and clinics. Prof. Nobecourt told us much that was of interest to pediatricians. The French hospitals have the air of being very old and seem to need financial aid. Of course the newer ones are different. In Paris one must know French or have an interpreter on tap; for one is expected to understand French. Unfortunately many of our party did not. Generally an interpreter was obtainable. After 12 days spent in this fascinating large city so rich in palaces and in mementoes of festive and tragic days we traveled via Belgium and Holland to England.

In London it was my pleasure to visit the London hospital. This is a large well known old place. There I heard a clinical lecture by Dr. Maitland Jones. He talked well and very much to the point. At the Hospital for Sick Children on Great Ormond St., a whole morning was enjoyed accompanying Sir Hugh Thursfield on ward rounds. The English doctor is first and foremost a clinician. While excellent laboratory work and research is done here, yet one feels that common sense and bedside study are the chief factors in the success of the hospital.

There are advantages and disadvantages in London as a place for graduate instruction in medicine. The fact that English is spoken helps considerably, then too while our ideas and traditions are not exactly the same, yet there is a good bit of uniformity. However, the Englishman is far more conservative, and has more regard for form than his energetic and breezier transatlantic brother. England is entirely different from continental Europe. One misses the ease and freedom of life in France or in Germany. There are no open air cafes. There is less music and the people in general are less interested in the arts and particularly in the art of enjoying life. England seems to me to have suffered tremendously from the World War and the financial depression is still in evidence. Nevertheless with its mutiplicity of hospitals and the large number of clear headed and courteous medical men, the American can there find much of value. All in all the writer is of the opinion that even with the marked advance that the United States has made recently in graduate medical instruction, that a doctor with the time and inclination will benefit greatly by a trip abroad.

MINUTES

REPORT OF COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION 1929

The population of South Carolina is estimated to be 1,800,000, of whom 18%, or 324,000 are illiterate. Of this population, 21,859 died last year. (1.2%). The diseases taking the largest toll were: tuberculosis, 1500; pellagra, 900; cancer, 769; typhoid, 307; circulatory diseases, 5300; kidney diseases, 1950. A large number of these deaths were preventable. Of course old age, accidents, and epidemics will always account for a certain number; and death from these cannot be reduced; but among the preventable diseases a large reduction is possible if the proper measures are made use of. Health conservation is not merely freedom from disease. As stated in the health education report of the joint committee on health problems in education of the National Education Association and the A. M. A.: The ideal of health is not mere freedom from obvious deformities and pathological symptoms. It is the realization of the highest physical, mental, and spiritual possibilities of the individual. Health education can be promoted only by emphasizing all aspects of health.

In our State noteworthy advances have been made in improvement of health conditions. The larger towns have made creditable showing in their health boards, in their health ordinances, inspection of premises, foods, milk and dairies, and disposal of sewage. The county health units in those counties where they exist, have made definite progress in vaccinating, inspecting, lecturing, and spreading the gospel of hygiene and sanitation.

By far, the most intensive efforts have been expended in the cause of tuberculosis prevention and cure. Data regarding this disease are acculumated and distributed extensively. The efforts of the State Tuberculosis Association have been largely responsible for what has been accomplished in our State. To illustrate: 15312 visits were made to patients' homes; 8382 persons were examined, and 454 suspects found; the sale of Christmas seals amounted to over $36,000.00. All this in 1928. There are branches of this body in several counties, all doing some work. But these efforts discover the greater needs. Adequate sanitarium facilities are woefully lacking. There are 13,900 active cases of tuberculosis in the State. There are few facilities for negro patients. The death rate among them is far greater than among the whites; and they are the carriers, spreading the germs by their more unhygienic methods of living. With all the efforts of the State Health Board and the State Tuberculosis Association, the needs in this one disease alone are still crying.

Highest source content of foods—preventing goitre.

Periodic health examinations have been urged for the past several years. If thoroughly carried out, they would save uncounted lives, untold suffering, and millions of dollars. The examination of children at the school age and even before that time has been in effect several years. One of the greatest advances in this field is the summer round-up in the Parent-Teachers Association. Last summer over 80,000 children were examined, and their defects remedied. In industries the advantages are immense. One industry will illustrate: railway employees. Defective vision, syphilis, hypertension, and various other disabilities continue to maintain the casualty lists. The chief surgeon of the Michigan Central railroad, in an extensive study of his pension department, found 53% of his pensioned men were pensioned from preventable causes; that the railroad life of these men could have been extended 6½ years had the causes of their disabilities been discovered in the beginning. It is estimated that there are 42,000,000 working people in the U. S. 25 million have defective teeth; 8 million have organic disease. Periodic health examinations could prevent a large amount of this disability. A recently formed organization in this country is one for the prevention of heart disease. Much of this can be prevented by proper care during the school age.

The greatest need of the present time is health education. It is undertaken by the State department of education, in the normal schools and in some of the colleges. The health departments of many states in the Union issue health bulletins. Some have publicity bureaus, from which health literature is sent, health talks given, over radio, and through the press; also lectures whenever possible. The advantages of such a department are incalculable. The physician too is a health teacher, and a whole time one. He must scatter this knowledge at all times among his patients and their families. "The really significant thing about this procedure xx is the fact it places the family doctor in a position to educate the individuals who come to him x x in the most effective of all ways, namely the face to face contact of the patient and the physician."

In addition to the physician is the teacher. It is recognized that the teacher can do more than anyone else in instructing children in health habits. This means Dr. Thos. D. Wood, of N. Y. stressed in his address before the Boston Health League last March. He said: Some conscious provision should be made by teachers and other school officials who set up the courses of study for health education so that attention may be given to this every hour of every day of every week of every month of every year of the child's life in school. Then, as has been suggested, unless the efforts of the school in health teaching articulate successfully with the life of the pupil in the home and in the community outside the school, comparatively little progress can be made.. He closes with: "Let every teacher be a health teacher, and every teacher be a health example."

Dr. Jno. M. Dodson, editor of Hygiea, in a recent address spoke of the close cooperation between the A. M. A. and the National Assn. He stressed the education of the teachers of the country to the importance of health as a fundamental plank in any educational program. "One cannot attend a meeting of educational associations today without constantly hearing the expression that whatever is taught in schools, health must be the fundamental thing of all; that without health, there is no use in teaching anything else. As the supt. of schools in Pittsburgh expressed it: 'We talk of teaching the four h's; heart, head, hand, health. Give me the teaching of health, and I care not who does the rest'." The National Education Assn. numbers 200,000 teachers. A program started by a committee of this organization set forth the objects of education: for citizenship, for self-support, for good family life. The committee was unanimous on the question that health should be the first item on the program.

It is evident that health education is the aim of the present day effort. The daily, the weekly press, both church and secular, the various community organizations, the Boy Scouts, the normal schools and the colleges, all offer fields of endeavor. And people are eager for health knowledge. Workers in tuberculosis, and county health officers inform me that whereas at one time, they were unwelcome, now they are invited into homes, schools, and clubs. But the health literature is meagre. Were it not for what is dispensed by the large insurance companies—and this does not go far—the health workers would be without literature for the homes they visit. We need at this time a publicity bureau of the State Health Department. This requires money. Previous legislatures have declined to make appropriations adequate for this need. On reason is the lack of effort by the State Medical Association. We have not educated our representatives to the need of this means of health conservation. How long it will require to educate them depends on us. To quote Dr. Dodson again: "The medical profession collectively and individually must undertake medical and health education of the laity. Vast numbers of people are eager for health and all that pertains to it. If we do not respond to this demand, others will supply it—the quack, the charlatan, the cultist, the faddist. It is up to us to get the ear of the public in every possible way, and give them scientifically reliable, dependable, information stated in such a way that it will impress them with the desirability of following the advice given."

In closing, I want to make just one recommendation: That in 1930 our association meet in Columbia at the time the legislature is in session; that we devote a good portion of our meeting to health conservation inviting the Senate and the Legislature meet with us: that we have men nationally prominent in this field of medicine to address us: that we may ask for a publicity bureau of the State Health Department to be established and maintained by State appropriation.

G. T. Tyler, Chairman.

(Report adopted except that part calling for meeting State Association in Columbia, 1930.)

REPORT OF COMMITTEE ON CONSTITUTION AND BY-LAWS

TO THE HOUSE OF DELEGATES
South Carolina Medical Association.
GENTLEMEN:

Your Committee on Constitution and By-Laws beg to submit their report. An effort has been made to propose such changes as, in their opinion, is necessary to bring our Constitution in line with the proposed Model Constitution for all states as approved by the American Medical Association.

The principal change, it will be noted, has to do with the election of a President-Elect instead of three Vice-Presidents as has been our custom. It is believed that this is a definite improvement over our present system, in that it will permit an incoming president to serve a year as President-Elect, during which time he is intimately associated with the President and have an opportunity to become familiar with the workings of the Association. At the present time, the President is elected and at once becomes the head of the Association. He may or may not have a great deal of contact with the workings of the Association and is thus placed at a disadvantage which it is believed the serving of a year as President-Elect, prior to his induction into office will remove these objections and disadvantages.

The second main change recommended is the election of the Speaker of the House of Delegates. It is believed by your Committee that the election of a man of executive ability, one thoroughly familiar with the inner workings of the Association to preside over the House of Delegates will naturally be in a better position to expedite the business of the Association, particularly as it would be highly desirable for this man to be reelected from year to year and would have a further advantage of removing those duties from the President, the latter, however, will preside as is now the case over the Scientific Sections of the Associations.

The proposed Amendments are as follows:

Proposed Amendments

To amend Section II, Article IV of the Constitution by adding to the present paragraph the following: "whose dues and assessments for the current year have been received by the Secretary" so that when so amended will read "The members of this Association shall be the members of the Component Medical Societies whose dues and assessments for the current year have been received by the Secretary."

To amend Article VI of the Constitution by rejecting the present Section in its entirety and substituting the following:

"The Council shall be the Board of Trustees of this Association and shall constitute the Finance Committee of the House of Delegates. The Council shall have full authority and power of the House of Delegates between Annual Sessions, unless the House of Delegates shall be called into Session as provided in the Constitution and By-Laws. It shall consist of the Councillors, the President, the President-Elect, the Secretary-Treasurer and a speaker of the House of Delegates, of the Association. Four (4) of its members shall constitute a quorum."

To amend Article IX, Section I of the Constitution by striking out the words, "three Vice-Presidents" and substituting the words, "a President-Elect, a Speaker of the House of Delegates" so that when amended shall read:

"The officers of this Association shall be a President, a Vice-President, a Speaker of the House of Delegates, a Secretary-Treasurer and eight (8) Councilors.

To amend Chapter III, Section I of the By-Laws by striking out the words, "one of the Vice-Presidents" and substituting the words, "President-Elect" so that when so amended shall read "all regular members may attend and participate in the proceedings and discussions of the general meetings and of the Sections. The general meetings shall be presided over by the President or by the President-Elect, etc."

To amend Chaper VI, Section I of By-Laws by striking out the words, "and of the House of Delegates" and substituting therefor the words "except the House of Delegates" so that when amended shall read "The President shall preside at all meetings of the Association except the House of Delegates, etc."

To amend Chapter VI, Section II of the By-Laws by striking out the words, "Vice-Presidents" in the first line and substituting the words, "President-Elect" and in the third and fourth lines strike out the words, "the Council shall elect one of the Vice-Presidents" and substituting the word "President-Elect" and by adding to the last sentence the following "and shall be a member of the Council Ex-Officio" so that when amended shall read, "The President-Elect shall assist the President in the discharge of his duties. In the event of his death, resignation or removal, the President-Elect shall succeed him and be a member of the Council Ex-Officio."

To amend Chapter VI, By-Laws by adding an additional section to be known as Section III which shall read as follows:

"The Speaker of the House shall preside over the House of Delegates. He shall make every effort to expedite the business of the House by appointment of such Reference Committees, etc., as deemed necessary. In case of his absence the House shall appoint a Speaker Pro Tem."

Proposed Change in Commitees

Amend Chapter 8, Section I so that when amended will read: Chaper VIII Committees and Sections:

A Committee on Scientific work.

A Committee on Public Policy and Legislation.

A Committee on Public Health and Instruction.

A Committee on Necrology.

A Committee on Publications.

A Committee on Medical Economics.

A Committee on Medical Education and Hospitals.

The effect of these amendments will be that the Committee on Prevention of Veneral Diseases will function under the Committee on Public Health. A new committee will be created to assist the Editor of the Journal in the selection of papers for publication. A new committee to investigate matters pertaining to the economic status of the profession.

(Amendments of Committees adopted. Changes in Constitution to be voted on 1930.)

J. H. Cannon, Chairman.

DISCUSSIONS AT A. L. R. AND O. SOCIETY

(NOTE: The following two short articles are discussions made by Dr. J. W. Jervey, of Greenville, South Carolina, of papers read at the annual meeting of the American Laryngological, Rhinological and Otological Society in Washington, D. C., in 1928 and in San Francisco in 1929. For reasons good and sufficient unto the Editor of the Transactions of that organization these discussions were not included in the publication of either annual volume of Transactions, but such a very large number of pressing requests have been made for copies of these discussions that Dr. Jervey has consented to have them printed here).

"THE EVOLUTION OF THE HUMAN FACE"

By H. H. Briggs, M. D., Asheville, N. C.

(Read at the annual meeting of the American L. R. and O. Society at Washington, D. C., May, 1928.)

DISCUSSION:

Dr. J. W. Jervey, Greenville, S. C.:

It is related that a small boy one evening asked his mother if it were true that he was descended from monkeys.

"My son," she replied, "I really cannot tell you; I wasn't very well acquainted with your father's folks."

And the old man, who was quietly reading the paper in the easy chair by the fire, arose without a word, went out to the coal shed and kicked the cat through the roof.

Dr. Briggs has gone to work to find out something without making anybody angry. Indeed, I think we shall all owe him a debt of thanks if he shall discover of what particular importance, if any, the paranasal sinuses, for instance, are to the human race. That they are changing along with the inevitable evolution of the face cannot be doubted, and personally, while they are a source of useful revenue to many of us, my feelings would not be injured if they could be completely abolished and obliterated forthwith.

Certainly the sinuses, as such, are not essential to human welfare, for when any of them are absent or done away with no recognizable damage ensues. On the contrary, they are a very present potential source of danger, and in the light of the Darwinian theory of the survival of the fittest it is clear that a trend toward their disappearance must be established. I doubt very much their physiological value as sounding chambers or air-warming cavities.

But when it comes to a consideration, pure and simple, of the evolution of the human face, I confess I am discouraged. One thinks of evolution as a general progression toward something better—something, let us say, more beautiful. Yet, when I contemplate the faces handed down to us by Phidias and Praxiteles, and those noble old faces in the days of "the glory that was Greece and the grandeur that was Rome," and even later the beauty that was perpetuated by Rafael and Michelangelo and Titian and Leonardo da Vinci, and then turn my gaze upon the sea of faces that confronts me now, I confess that I have a vague feeling of goneness, as if something had gone wrong with the general scheme of evolutionary improvement. So, I can only concludo (and I have consulted the mirror) that our present physiognomies must represent a racial atavistic tendency, kicking back some many thousands of years.

Beauty may be "in the eye of the beholder," but if that be true, then, today I am blind! (Except, of course, for the ladies whom I have the honor to be addressing).

But there is hope. Not so very long ago Professor Muller, of the University of Texas, announced to the International Genetics Congress, in Berlin, that by exposing the Drosophila, or common fruit-fly, to the x-rays, he had obtained a hundred or more distinct mutations, or "sports;" and these changes were reproduced and perpetuated in their offspring. This is merely highspeed evolution. The chromosomes, containing the hypothetical "genes," or hereditary units, were apparently definitely and permanently changed from their previous course of reproduction and perpetuation.

If this can be done in the fruit-fly it is not so far a cry to assume that it can be done in any other form of life, even in man!

The potential rays of the earth's natural deposits of radium, augmented by the x-rays of man's harnessing, may in the near future be a powerful influence in the trend of evolutionary development.

It may not be, then, altogether within the realm of fantasy, to see the time when these potent forces, backed up and reinforced by similar elements which are known to exist in suns and stars, may be directed by the mind and hand of man for the benefit of future mankind and the glory of a Great Creator! Thus even may the ancient study of Astrology be vindicated!

Then we may witness the departure from human anatomy, without ceremony or loss of time, of the vermiform appendix, the faucial tonsils, the paranasal sinuses and other vestigial remnants of bygone days.

Then perhaps, may come the emancipation of the Doctor and

"We shall rest, and faith, we shall need it
Lie down for an aeon or two,
'Till the Master of all good workmen
Shall set us to work anew."

But I fear I am soaring, or you will think I am, and I would not have it said of me as it was of the pulpit orator, who, when he seemed to have reached the zenith of his eloquent intensity was interrupted by a shrill voice from the gallery crying:

"Cut his galluses and let him fly!"

When Dr. Briggs honored me with an invitation to discuss this paper, I wrote to an old friend of mine, of fecund wit and jovial propensities, asking him how I could attack a discussion of this subject. His reply was characteristic. "You might talk," he said, "about faces in general; how God gives us one and we change it. Mention different kinds of faces as malignant, musical, heavenly, milky, old familiar, awful, foolish, sad, dimpled, nice, sweet, scholarly, nosey, etc. Then allude to Aurora, Cupid, Venus, et alia. In closing bring in something about Old Aunt Jemima's Buckwheat cakes; speak briefly of the Red, White and Blue American faces; then wave the flag and sing the Star Spangled Banner!"

I am ready to do all of these things, but something tells me that neither time, nor you, Mr. President, will permit.

So, in conclusion, I shall only observe that while as Dr. Briggs has told us, it may take a million years for the horse to lose his toes, and a half million for man to lose his tail, I am confident, as I see it, that this country can never lose Al Smith; and it looks as if it will take another million years to lose Prohibition.

"THE PREPARATION OF PAPERS ON MEDICAL SUBJECTS. HOW TO MAKE THEM INTERESTING AS WELL AS INSTRUCTIVE. THE EDITOR TALKS"

By George L. Richards, M. D., Fall River, Mass.

(Read at the annual meeting of the American L. R. and O. Society at San Francisco, California, July, 1929.)

DISCUSSION:

Dr. J. W. Jervey, Greenville, S. C.:

A few nights ago while crossing the scorching deserts between Salt Lake City and Los Angeles I lay in my berth wooing sleep with no measure of success and restless from the exhausting heat. Suddenly it flashed through my mind that the paper of Dr. Richards offered on our program was the only one which had no provision for the opening of discussion. I felt that it should be discussed. And How! Instinctively I knew that fate had called me to a stern duty, and there and then, in the midst of those hot sands, soothed by the roar and rumbling of a mighty Pullman train I knew that I was going to say to you what I am saying now; and so I slept, my mind relieved of the distressing thought that so important a detail had been overlooked.

It was a happy thought of Dr. Richard's when he determined to tell us how to write interestingly; but it was a heavy task thus self-imposed.

Since Milton's Areopagitica, which brought about freedom of the press throughout civilization, men have tried, usually in vain, to teach other men this highly attractive art. The trouble is that the interesting writer, like the poet, **nascitur non fit.**

This is personality, or the lack of it. Where the germ is innate it may be trained and developed through years of a favorable environment or association into the beauty, charm and sweetness of a full-blown flower; but it cannot be manufactured or painted, or planted and grown into anything worthwhile. One can only be taught to write good English.

But I am irresistibly drawn to make merry for a moment or two with our able and popular editor; and for invading the sacred editorial precincts with argument or suggestion I can only plead justification by virtue of my own service in daily journalism from cub reporter to editorial chair, and several years as editor of a medical journal. I mention this only to remind you that I am not merely "a looker-on in Vienna" with a **penchant** for unenlightened criticism. Now, **revenons a nos mouton.**

Dr. Richards is without a doubt a thoroughly competent editor of our transactions. Only one or two minor details of his work could justly be criticized, I think, and I believe we all feel that our Society owes him a very great debt of gratitude. Just one of these little discrepancies (from my viewpoint) shall be mentioned here.

I should like to challenge any member to look carefully through our transactions for these sixteen years and find a single flash of humor of any kind to attract his attention to a paragraph or an article.

Dr. Richards tells us this is purposely so; which is precisely my chief reason for objection, because it does not need to be so. Must we lie down forever in the prototypical shadow of British austerity and gloom?

Or, shall we be ourselves and smile a while even in the midst of our intellectual and scientific travail?

Many a time our brilliant Mosher has flashed a bit of sparkling repartee or poignant epigram across the floor, but if any of it was preserved in our Transactions, I have never seen it.

Many a time our inimitable Shurly has sped a shaft of his dry humor into the heart of a discussion, but the pages of our transactions are quite innocent of recognizing such delectable vagaries.

Many a time our gifted and beloved Stucky

has recounted a witty ancedote whose just and apt and proper purpose was to "point a moral to adorn a (scientific) tale," but no place was ever found for one of these within the sacred pages of our solemn, sombre tome.

And so one might recall many a member splashing into an argument on the floor with a bit of wit and humor wholly apropos and germane and even of high contributory value to the discussion, but because it was tainted with levity, in spite of its evident virility, it died aborning.

And, Mr. President, I assure you I speak at first hand. In my poor and humble and diffident way I have once or twice tried to lighten the leaden weight of seriously ponderous discussion. Of course, my efforts have merely shared the fate of others, so I am neither vexed nor sore.

But I must submit to you that the greatest and most serious thinkers have seldom overlooked the fact that a light or sparkling word here and there does much to attract and catch an audience and hold it.

Socrates, Aristotle and Plato knew it well; Shakespeare was a master user of wit in sharp contrast to severity; Darwin and Huxley knew its value and the joy of using it; the great Osler, **sui generis,** often used a witty epigram or a sly assertion to drive home a point; the great jurists of all history have known and utilized the deadly efficacy of wit and ridicule; bishops and other prelates of the church may use the weapon as well in their polemics as their irenics; and even the Holy Scripture regales us with the highly amusing imagery of old Nebuchadnezzar on all fours nibbling at the grass; and the story of the slaughter of the Philistines with the jawbone of an ass, which doubtless has often had a humorously parabolic interpretation.

And so I plead for the admission of a little sunshine amidst the gloom of scientific ponderosity, wherever it reflects the feeling and the atmosphere of the meeting that is being reported. Members have a right to know what transpires at a meeting and besides it would do much to stimulate interest, especially in those members who have not attended the meeting, as well as to whet their appetites to be present at the next; even if for no other reason than to witness the fireworks.

Verily, the bard of Avon might aptly be paraphrased in fashion like this:

"The man that hath no humor in his soul,
And is not moved where ready wit resounds,
Is fit for treason, stratagems and spoils;
Let no man trust him!"

Of course, I feel perfectly safe in making this discussion since on a basis of past performance, I know that it will never appear in print to give comfort to mine enemies.

And so let us ever pray!

SOCIETY REPORTS

REGULAR MONTHLY MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY HELD AT McNABB'S PLACE ON THE SALUDA RIVER, MONDAY, AUGUST 5TH, 1929

The meeting was called to order at 8:30 P. M. by the President, Dr. Murray, with 45 members and guests present. Dr. Carpenter was called upon to offer the invocation, after which a most enjoyable fish and chicken supper was served. Our guests of honor were Dr. D. Lesesne Smith and some representatives from the Faculty of the Southern Paediatric Seminar.

After supper President Murray called upon Dr. Smith, who made a few introductory remarks, who stated that the student body of the Seminar consisted of physicians from Virginia, Alabama, North and South Carolina, Louisiana, Georgia, Florida, and Mississippi most of whom were general practitioners.

Dr. Smith then called upon Dr. Richardson of Black Mountain, N. C., who mentioned that the Ninth District of the North Carolina Medical Society is putting on a post-graduate course in paediatrics, and that the instructors were members of the State Society. Instrucors were stated as being members of each speciality, namely: surgery, eye, ear, nose and throat, orthopaedics, dermatology, dentistry, especially from a preventive standpoint, and general paediatrics. Dr. Richardson then stated that this work had already reached 100 members of the 9th N. C. District. It was also stated that the members of the North Carolina State Medical Association were attempting to lower the State's infant mortality rate by the proper education of the public in pre-natal care, this educational program being carried out under the auspices of each County Medical Unit.

Dr. Funkhauser of Emory University then addressed us. His subject was "Vomiting in the New-Born." He stated that it may or may not be due to a serious condition, that it was usually due to dehydration, also lack of food. These cases usually respond to 2-4 per cent glucose subcutaneously, care being taken to rest the stomach from 24-48 hours. In case of no response to this treatment, gastro-intestinal studies should be carried out under the fluoroscope, using barium and breast milk, in which the barium through its weight overcomes the vomiting and increases peristalsis. In dilatation of the stomach, lavage increases its tonicity, and ceases vomiting. The hypertonic stomach is relieved by proper doses of atropin sulphate, given hypodermically. Atresia of oesophagus and stomach is rather rare, but is nearly always fatal. Vomiting is the only symptom of this anomaly. Pyloric stenosis, and pylorospasm do not occur, as a rule until about the 5th week of life.

Dr. Wilson of the faculty of Vanderbilt University was then called upon who spoke on patent foods. He stated that the majority of babies were fed with these foods. Classification of these foods included A. Incomplete foods, or those which had to be mixed with cow's milk and B. Complete foods, usually occurring in the form of desiccated milk. Dr. Wilson stated that there was no excuse for incomplete foods as the physician should be able to fee d babies properly. Dr. Wilson mentioned that Mellin's food is merely a carbohydrate (a malt sugar) and that it would suit some babies. He also failed to agree with the manufacturers that Mellin's Food was indicated in the diarrhoeas. Dennis Food is almost protein-free. Imperial Grabnum is also identical with baked starch. Condensed milk consists of Fats 8%, Protein 8% and Sugar 50%. This food feeds more babies than paediatricians, and produces fat babies with little or no resistance to infections, because there is so much sugar. This is the diet of the obstetrician, who, finding that the baby does not thrive, then turns it over to the paediatrician as "a feeding case." This is preferable to fresh cow's milk only when the purest milk is not obtainable. The fat globules are smaller. Imitations of breast milk is not always good because the fat of cow's milk and human milk are different. "S. M. A." and "Recolac" cannot entirely replace mother's milk. In any artificial feeding, the vitamines should be supplied with fresh fruit juices and cod-liver oil, as excessive heat is apt to destroy these vitamines.

Dr. McKibben of Jacksonville, Florida was then called upon. Dr. McKibben stated that the instruction obtained at the Seminar was excellent, and so were the clinics; many rare and interesting cases are encountered. Speaking of larva migrans, (creeping eruption)— it is successfully treated with 1. Carbon Dioxid Snow and 2. Ethyl acetate and celloidin. Dr. McKibben advised us that there were no cases of mastoiditis or rheumatic fever in Florida.

Upon the certificate of Dr. O. L. McFadyen of the Cumberland (N. C.) Medical Society, Dr. R. A. Blakey was voted as transferred into the

Greenville County Medical Society.

There being no further business, the meeting adjourned.

Chas. C. Grace, M. D.,
Acting Secretary.

THE RIDGE MEDICAL SOCIETY

The Ridge Medical Society met in Dr. Timmerman's offices in Batesburg, S. C., the nineteenth of August at 7:30 P. M., with a larger attendance than usual which included the following named visitors: Miss G. McMaster, Lexington County Health Nurse. Dr. Boyd and Coggeshall of The Murray Lake Company, and Dr. Rob't. W. Houseal of Newberry.

In the absence of the President, Dr. D. M. Crosson acted as such.

Dr. W. P. Timmerman reported a cast of fracture of the frontal bone with some loss of brain substance which recovered with no apparent serious injury resulting, which was discussed by Dr. D. M. Crosson, who saw the case with him.

Dr. R. W. Houseal made a practical address on pernicious anaemia, with special emphasis on the diet.

Miss McMaster gave an outline of her work as Health Nurse among the tubercular and others in Lexington County.

Dr. Westrope also gave an outline of his work as County Health Officer and offered to co-operate with the various doctors in any public health work.

Supper was served at The Batesburg Hotel and was attended by the ladies auxiliary and their guest, Mrs. R. W. Houseal of Newberry.

Dr. W. P. Timmerman read a sketch of Dr. I. J. Teague of Johnston. He asked the co-operation of others in securing sketches of a few very old physicians, who are not living.

Excellent music was furnished in the dining room by Miss Margaret Edwards on the piano and Dr. G. R. Westrope on the violin.

The following named officers were elected for the next year:

Dr. O. P. Wise, Saluda—President.

Dr. S. M. Pitts, Saluda—Vice President.

Dr. G. F. Roberts, Lexington, Vice President.

Dr. C. Beeler, Edgefield— Vice President.

Dr. W. P. Timmerman, Batesburg,— Sec'y.-Treas.

The president was authorized to appoint all necessary committees.

Short speeches were made by Drs. Crosson, Roberts, Boyd, Coggeshall and Houseal.

The next meeting will be with Dr. and Mrs. James Crosson, in Leesville, in their palatial home.

LATER—September 3—Dr. D. M. Crosson is quite sick at his home with a carbundle on his neck.

Dr. and Mrs. J. S. Black have returned to Florida for the winter.

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EDITORIAL

MEETING OF SOUTHERN MEDICAL ASSOCIATION

One of the great Associations of the world, numbering now about ten thousand members meets at our very doors in Miami, November 19-22. It goes without saying that a large number of South Carolina doctors have made plans to attend. Dr. William Weston, Councilor of the Southern Medical Association, has named the Sea Board Airline Railway as the official route from South Carolina and suggested that a special train to be called the "Iodine Special" would be the best means of travel. It is urged that physicians who may find it convenient to join such a party write either to Dr. Weston at Columbia or to the Division Passenger Agent of the Sea Board at the same place. We believe it would be an opportune time to advertise the natural resources of South Carolina before that great convention as well as take advantage of the fine scientific programs and the splendid atmosphere of fellowship for which the Southern Medical Association is noted.

FOURTH DISTRICT HAS A GREAT MEETING

One of the important medical societies of the South is the Fourth District representing seven of the prosperous counties of the Piedmont. This Society held a splendid meeting at Central recently under the Presidency of Dr. E. C. Doyle of Seneca. Since its inception more than twenty years ago this Society has kept inviolate its early determination to develop its own membership instead of making the chief feature papers from invited guests. We believe no District Society puts out better programs or has more interesting discussions. Indeed the Fourth District is famous for its large attendance and fine fellowship. The new President, Dr. L. G. Clayton, of Central will continue to inspire the

members of the Fourth District by his wise leadership and enthusiastic devotion to organized medicine. Dr. Clayton is probably the oldest regular attendant of his county society in the State.

THE A. M. A. JOURNAL PASSES THE ONE HUNDRED THOUSAND MARK

We have watched with great admiration for the past few months the increasing circulation of the world's greatest medical journal. To have reached the one hundred thousand figure is indeed an achievement of world wide importance. The House of Delegates at Portland authorized the subscription price to be increased from five to seven dollars in 1930. This may look like a marked advance but really it is not when compared with many of the best journals in different parts of the world. Some of the special journals of the A. M. A. have long been increasing their subscriptions at eight dollars. When we recall the extraordinary service to the profession and to humanity rendered by the income of the Journal of the American Medical Association and the much larger development contemplated by the Board of Trustees we should be very glad to respond promptly to this small amount of increase next year in the subscription rate.

It is planned that in a few years a new headquarters plant will be erected in Chicago, commensurate with the great interest of the largest and most important medical organization in the world. We fail to see why every eligible medical man in the United States and its possessions should not be a full fledged member of the parent organization. This would mean a normal membership, approximating one hundred and fifty thousand. We are confident that the A. M. A. will make it well worth while for the entire profession of America to come into the fold.

TENTATIVE PLANS FOR FLORENCE MEETING

The Florence County Medical Society under the Presidency of Dr. James McLeod, opened the fall meetings on the night of October 8, and in addition to some very interesting papers read by local members, heard addresses by President May of the State Association, Dr. Hugh Smith, Chairman of the Scientific Committee, the Secretary Editor and guests from neighboring counties. At this time details were discussed by various committees and the Officers of the State Medical Association, looking to the success of the meeting of the State Medical Association at Florence early in May 1930. One gratifying feature is very evident, that is, the whole Pee Dee section of the State will cooperate to make the next meeting a great success. There is a definite determination on the part of the Officers and the Scientific Committee to put through a program, replete with practical papers, each one limited strictly to the fifteen minute rule provided by the By-Laws and with the usual five minute discussion. The Committee decided to modify the program of opening exercises by making them less formal thus saving considerable time at the beginning of the meeting for scientific papers.

There was a general agreement, too, to make a place for entertainment features designed to relieve the strain of long hours of steady grind with scientific papers. Further details will be published as time goes on.

The Florence County Medical Society inspired as it is by one of the important medical centers of the South always measures up to every expectation when it comes to entertaining the South Carolina Medical Association.

ORIGINAL ARTICLES

*SOME USES OF MAGNESIUM SULPHATE IN SURGICAL PRACTICE

By J. R. Young, M. D., Anderson, S. C.

"Why, in God's name, in our days is there such a great difference between the physician and the surgeon? The physicians have abandoned operative procedures, either as some say, because they disdain to operate with their hands, or rather as I think, because they do not know how to perform operations. Indeed, this abuse is so inveterate that the common people look upon it as impossible for the same person to understand both surgery and medicine. It ought however to be understood that no one can be a good physician who has no idea of surgical operations, and that a surgeon is nothing if ignorant of medicine." Harvey Cushing who quotes the above statement adds "that it was transcribed from writings that exist only in manuscript, since Lanfranc, called the founder of French Surgery, who expressed the sentiment lived two centuries before Guttenburg."

The statement that "no one can be a good physician who has no idea of surgical operations and that a surgeon is nothing if ignorant of medicine" contains a perennial truth, though it was uttered in the thirteenth century. It may be that in our own state and in our own day, the surgeon is tempted to become merely the dextrous operator and the physician too readily refers even minor operations to the surgeon. Having in mind that "The surgeon is nothing if ignorant of medicine" I have chosen a very common, a very cheap, and a very humble medicine for your consideration.

In this paper we propose to present our experience in treating a variety of pathological states with Magnesium Sulphate. Let us emphasize in the beginning, two facts. (1) A balanced presentation of these varied diseased conditions is not attempted and (2) Magnesium Sulphate is only a part of the treatment and is prescribed only as a valuable adjunct to the generally accepted methods.

For the sake of convenience only we will divide the subject into three parts according to the method of administering the drug—by mouth, by needle, and by local application.

1. In our experience, Magnesium Sulphate in half ounce to one ounce dose in small quantity of hot water is a reliable remedy for the mild post-operative abdominal distention that does not respond to the invitation of an enema. While usually this distention occurring on second or third post-operative day is satisfactorily relieved by enemeta, every surgeon sees sometime a patient who is not relieved by this method; and in such cases this old fashioned, quick acting purgative will often give relief and is much less drastic than the Pituitrin which we sometimes use. And in case it is not effectual, the latter may still be given.

Again, we have found Magnesium Sulphate by mouth in daily doses of one ounce in hot water, of distinct value in the preoperative treatment of the acute, febrile exacerbations of gonorrheal salpingitis with pelvic peritonitis. As every surgeon knows, it is safer to operate upon such cases after the so called "freezing" process has been established and the patient has become afebrile or nearly so. This state is hastened in our experience, by adding to the usual treatment—Fowlers position, Murphy drip, opiates as necessary—the giving daily of an ounce of Epsom Salts. This is not an original idea but since hearing of its use in this class of cases, we have tried it out and have become convinced of its value.

Again, in post operative management of local or diffuse plastic peritonitis, Magnesium Sulphate may give valuable aid. By refering to a patient recently treated in this way, we can best present this for your consideration.

A young man of thirty, admitted to the hospital on sixth day of an attack of acute appendicitis having general distention and rigidity and other symptoms of diffuse peritonitis. At operation under local anesthesia on seventh

*Read before the South Carolina Medical Association, Charleston, S. C., May 8, 1929.

day, a ruptured, gangrenous appendix with diffuse plastic peritonitis was found. A plastic exudate and edema of terminal ileum and caecum were especially marked. Post operative treament consisted in semi Fowler's position, Murphy drip of hypertonic alkaline solutions, fluids freely in axillae, opiates as needed, diathermy twice daily through abdomen, stomach wash as needed. At end of second day after stomach wash, one ounce of Epsom Salts left in stomach. The free watery evacuation in a few hours not only emptied the distended bowel of some of its toxic content, but tended to reduce the edema about the ileo-cecal angle just as it tends to reduce edema of feet or eye lids. This dose was repeated daily for three days, when the distention had largely disappeared. The patient made a good recovery. In several other ruptured appendix cases having marked edema about the ileo-cecal angle, we have used salts with good results. I suppose this treatment is contrary to the dictates of accepted surgical treatment of today, but is there any good reason why this is not a logical procedure? Magnesium Sulphate by mouth in the peritonitis patient whose abdomen is splinted and whose sensibilities are numbed with opiates, seems to cause very little peristaltic pain. If a bowel has been demonstrated at operation to be markedly inflamed and edematous, why is it not good therapy to reduce the edema and thereby lessen the degree of partial mechanical obstruction at the ileo-cecal angle and at the same time flush out toxic contents of the proximal distended gut?

II. "In hypertonic solution Magnesium Sulphate intravenously will decrease cerebro spinal fluid pressure and reduce brain bulk." Our experience in using this drug intravenously agrees with this statement quoted from an article in Journal American Medical Association by McNeile and Vruwink.

To reduce intra-cranial pressure we have used Magnesium Sulphate intravenously (a) in brain injuries. In any case of skull fracture when operation is not indicated, this procedure may form a valuable adjunct to the usual methods of threatment. A case so treated by us not long since made a good recovery after having been in coma for several days. In this case X-ray showed linear fracture of vault with no localizing symptoms. Spinal fluid pressure was high as revealed by spinal manometer reading. Spinal punctures were done daily, fluid being withdrawn until pressure was normal. The spinal punctures alone might have sufficed to relieve the increased pressure but the additional measure of giving twenty cubic centimeters of ten per cent solution of Magnesium Sulphate seemed worth while since the coma was due not to the fracture per se, nor to hemorrhage as proved by the clear spinal fluid, but to traumatic edema of the brain. Since Magnesium Sulphate does dehydrate swollen tissue it would seem logical after doing a spinal puncture (and thereby temporarily increasing space in skull) to give intravenously an agent that would cause the swollen cells to give up some of their fluid and thus decrease intra cranial pressure.

CASE REPORT.

(b). In treating edema of the brain of toxic origin, we have found Magnesium Sulphate given intravenously, useful. This group is well illustrated by toxemia of pregnancy and eclampsia. I suppose that one hundred per cent of the doctors present who treat toxemia of pregnancy prescribe epsom salts by mouth. McNeile and Vruwink have suggested that the relief of headache which usually follows its use in such cases may be due to cerebral dehydration and not merely to its purgative effect.

And Martin Fischer teaches in his book on "Edema and Nephritis" that the varied symptoms present in such cases are due to same diseased condition—namely edema or hydration —in different tissues and organs of the body. The edema of face, hands, and feet as seen by the eye; the edema of the kidneys as evidenced by albumin and casts in urine; the edema of the brain as evidenced by headache, or, in a more advanced state, by convulsions; edema of the retina as shown by blurred vision are all similar expressions of different tissues and organs to a common toxic agent. We may not give to this toxic agent a specific chemical formula but we may designate it as the undesirable "left overs" resulting from increased metabolism of the "two in one" woman. On this hypothesis the sine qua non of treatment

would be DEHYDRATION plus what sedatives might be required, to prevent serious damage to vital organs like the kidneys and brain. Is not this the essence of the treatment that you have found most satisfactory in toxemia of pregnancy and eclampsia? In several pre-eclamptic patients we have seen the headache and the impaired vision relieved by giving twenty cubic centimeters of ten per cent solution Magnesium Sulphate as indicated. Last week the last pre-eclamptic patient we have treated was admitted to the hospital near term. She was a fat primipara of thirty who had not responded to treatment at home carried out by a very capable physician. Her blood pressure was 188/110; she had some disturbance of vision and headache; a plus two albumin and a moderate edema. She was given twenty cubic centimeters of ten per cent Magnesium Sulphate intravenously and one fourth grain Morphine on admission at ten P. M. The next morning she was given one ounce Magnesium Sulphate by mouth. At this time the headache had disappeared and did not recur. Labor was induced by bag and the patient was delivered forty-eight hours later. Her blood pressure a few hours before delivery was 150/90.

But when eclampsia has already developed, nothing in our experience in a few cases, has been more effective in controlling the convulsions than the same dose of Magnesium Sulphate intravenously, repeated every few hours as indicated. We have never seen any respiratory embarrassment from its use. Meltzer has pointed out that any respiratory difficulty caused by its repeated use is immediately relieved by injecting a few cubic centimeters of Calcium Chloride solution intravenously.

(c). The surgeon occasionally, and the physician often has to treat so-called uremia. Without going into details, probably all will agree that the usual pathological back ground of this syndrone is vascular disease with a resulting edema of various tissues and organs. Edema of kindneys results in low urine output with albumin and casts; edema of brain may cause only headache, but when it increases enough to cause coma or convulsions we call the condition uremia or uremic poisoning. In such cases Magnesium Sulphate intravenously may give valuable aid. The following case is illustrative:

Mrs. L. age eighty-two, had suffered with cardio-vascular-renal disease for many years. Last December, as a sequel to a mild respiratory infection, she developed an unusual sluggishness and dizziness which progressed to a light convulsion followed by coma. Three doses of twenty cubic centimeters Magnesium Sulphate intravenously, together with the usual symptomatic treatment relieved the condition after she had been in slight coma for several days.

A few days ago a man of sixty-five was admitted to hospital having shortly before been found in unconscious condition on floor of machine shop. He had evidently fallen as he had bruises on scalp and face but these proved to be of minor importance. He was found to have chronic vascular disease. Nausea, vomiting and coma indicated cerebral edema. He was given epsom salts by vein and soon regained consciousness.

(d) Meltzer reported a few years ago on the use of Magnesium Sulphate intravenously in treating tetanus. The dose advised by him for adult was one cubic centimeter of a twenty-five per cent solution for each twenty pounds of body weight and about half the relative dose in children. He reported that convulsions were markedly relieved—usually for twelve hours or longer—and that it had therefore proven a valuable adjunct to the treatment by tetanus antitoxin.

We have had this verified at the Anderson Hospital in one case treated by Dr. H. H. Harris. His patient recovered after 10 days intensive treatment by tetanus antitoxin during which time relaxation and ability to take food was secured by giving Magnesium Sulphate intra-spinally. We have likewise had at the Anderson Hospital one case of strychnine poisoning in which convulsions were relieved by this remedy.

III. We have found Magnesium Sulphate in 5 to ten per cent solution, a valuable remedy for local application in inflamed or suppurating wounds. Within the past few days we have treated erysipelas of the fore arm in this way with satisfactory results. And we have in the hospital now, a patient with phlebitis, involv-

ing both internal saphenous veins, who has been helped by application of compresses wet in warm five per cent solution of Magnesium Sulphate. This treatment seems to cause an influx of healthy serum rich in anti bodies to the affected part. And if the wound is suppurating the discharge soon changes to a serous discharge. These results are not due to any germicidal action of the drug for it has no such property. They must be due then to some such action as suggested above, and this action—the ability to dehydrate inflamed edematous tissue-whether it be brain tissue, kidney tissue, or cellular tissue is the common denominator that makes this cheap, accesible drug a valuable remedy in such a variety of diseased conditions.

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DISCUSSION

Dr. J. S. Rhame, Charleston: I have listened with a great deal of pleasure to Dr. Young's paper about the use and almost in some instances, I might say, the abuse of magnesium sulphate. Frankly, I have never been so bold as to be quite so heroic in giving laxatives and purgatives postoperatively as he has. On the other hand, I want to commend him for his originality in going ahead. We never get anywhere if we do not try. Most of us have been greatly annoyed, on the second or third day, by postoperative distention due to paralytic ileus —we hope it is not mechanical, at any rate. We hear of the use of all kinds of enemas. I see no objection to the use of magnesium sulphate in certain cases. I take it for granted that the doctor does not use it as a routine in all cases; no doubt he has selected his cases. In the ordinary appendix case there is doubtless very little danger of peristaltic action reopening the lumen of the appendix. I certainly do not see that giving magnesium sulphate would do any more harm than giving pituitrin, because you know where you do get a response it is rather violent and patients sometimes suftive administration of pituitrin. So I want to fer a great deal of pain following the postoperacompliment Dr. Young on the use of magnesium sulphate.

I think we are all pretty well agreed on the usefulness of magnesium sulphate in the toxemias of pregnancy, in the eclamptic or preeclamptic states, and also in head injuries, whether it is used intravenously, subcutaneously, or intraspinally. Personally I have used it subcutaneously and intravenously.

I think we are often inclined to try things simply because they are new but come back to our old friends, finding them like an old pipe, the sweetest after all.

Dr. George H. Bunch, Columbia: There is one statement Dr. Young made which I think should not go unchallenged, and that is that magnesium sulphate could possibly be of benefit in acute peritonitis after operation. We know the most essential thing in the treatment of peritonitis is physiological rest, and we know that any cathartic (which includes magnesium sulphate) increases peristalsis and stimulates the gut instead of putting it in a state of physiological rest. I have made it a practice, ever since I have been doing surgery, of watching people after abdominal operation; and those with acute peritonitis I think surely do better if kept under the influence of morphin with hot stupes on the abdomen. I have been called into consultation more than once to see the patient of a brother surgeon who has had a cathartic administered too soon after operation, and he is sure to do badly. I am sure if this practice is adopted we shall see our mortality increase very considerably.

Question: Please give the contraindications to giving two cc of fifty per cent sol. in eclampsia.

Dr. Young, closing the discussion: I do not think there would be any objection to using the dose of magnesium sulphate that you mention. I suspect the dose that you refer to, for use in eclampsia, is probably the dose used mostly by obstetricians. I happen to have the large ampoules of 25 % sol., on hand, and that is why I use them.

Magnesium sulphate is not applicable to the routine care of abdominal operation cases. The patient I refer to is the one not relieved by enemas. I have found by trying that such case may be relieved by magnesium sulphate. All of us have some cases that have some distention on the second or third or fourth day; we look for it to go down, but it does not, and possibly they

begin to vomit. In these cases this remedy is worth trying.

In a diffuse spreading peritonitis I think if we give magnesium sulphate it will do no good and may even do harm. If the patient has plastic peritonitis, with very heavy plastic exudate around the cecum, there is often a mechanical element. In those cases where you have operated and drained the area, using the Fowler-Murphy treatment, very often if you use the magnesium sulphate you will find it does help them. I have seen it help such cases.

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*THE DIAGNOSIS AND MANAGEMENT OF HEART WOUNDS

By Roger G. Doughty, B. S., M. D.
Columbia, S. C.

This paper is based on two cases of stab wound of the heart which were operated upon. In each instance the wound was in the right ventricle extremely close to the descending branch of the coronary vessel. Death followed the formation of an intra-ventricular clot in one while the other recovered. Both are reported in detail elsewhere in the literature.

The large majority of heart wounds are practically immediately fatal and for this reason their operative treatment will remain relatively rare. It is only relative however, for 402 cases of stab wounds were collected from the literature in 1924. The mortality in such collections varies between 40% and 60%. When it is remembered that there is little incentive to report unsuccessful results it is obvious that this figure is low.

In the field of cardiac surgery, as in so many others, the application by the surgeon of established experimental facts was very tardy. Block, in 1882, reported the results of the surgical treatment of experimentally produced heart wounds but it was not until 1895 that Cappelen, a Norwegian, performed the first operation. The first successful repair of a lacerated human heart was by Rehn in 1896.

The opportunity to suture a wounded heart may come to the surgeon ripe in experience and fully prepared for the trying undertaking or it may be forced upon the physician at the very beginning of his career. To look forward to this emergency and prepare for it is such and abstract proposition that few force themselves to it but to successfully deal with the situation some preparation is essential, an understanding of the structure of the thorax and mediastinum of course, but also some comprehension of the mechanism of the lesion and its physiological consequences.

The ventricles of the heart are composed roughly of v-shaped loops of muscle extending from the base toward the apex. A tranverse laceration severing all of the muscle fibres throughout its length will result, as was shown by O'Day, in an explosive rending of the ventricular wall. An oblique incision leaving intact parallel muscle bundles relatively close together tends to close with each systole. In general, wounds in the auricles and the right ventricle bleed constantly while those in the left ventricle, where the blood is under high pressure, bleed in spurts.

Extensive injuries of the pericardium, allowing the free passage of blood into the pleural cavities or to the outside of the body, present essentially the problem of an exsanguinating hemorrhage. A clean incision leaves the pericerdium practically fluid tight and permits the blood to accumulate in the cavity. As the intra-pericardial pressure rises a progressively lessening amount of blood escapes from the heart with each beat and, relaxation being hindered, it can receive only a constant diminishing volume of blood into its chambers. It is obvious that when the intra-pericardial pres-

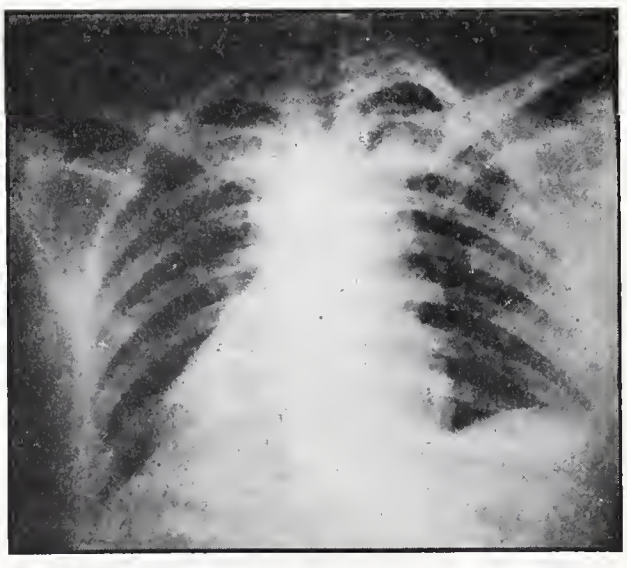


Figure I. The pericardium distended with blood. Heart tamponade

*Read before the South Carolina Medical Association, Charleston, S. C., May 8, 1929.

sure reaches the venous pressure heart action must stop but a very delicate adjustment has been known to presist for hours before this denouement occurred (Fig. I.)

In addition to heart tamponade two other factors enter the picture. They are: heart shock, which results from any cardiac wound even though it does not penetrate the wall; and the formation of a blood clot. The former further impairs the heart efficiency, while the latter, though it may plug the hole, adds to the burden of the struggling organ by forming a wall of relatively solid matter around it.

Cardiac injuries are not always easy to recognize. The typical picture is that of a patient with a precordial wound which may or may not bleed freely, extremely restless, or in a frank delirium, profoundly shocked, pallid, sweaty, and with a feeble or absent pulse and a very rapid heart beat. There is an altered apex beat with distant heart sounds. The increase in cardiac dullness cannot always be demonstrated and a haemopneumothorax may complicate matters.

The delirium and wild thrashing about of a person who is pulseless and obviously in profound shock is a striking thing. Its opposite, absolute rest, is of course imperative. A large dose of morphine will usually change the picture from one of imminent death to that of a quiet, co-operative patient with a relatively good pulse and a heart rate moderately above normal. (Fig. II). The use of cardiac stimulants or drugs that increase the blood pressure naturally occurs to everyone but it is distinctly contra-indicated because such stimulation would only increase the loss of blood from the circulation and raise the intra-pericardial pressure if tamponade be present. For the same reasons the injection of salt solution before operation is, at best, a questionable procedure.

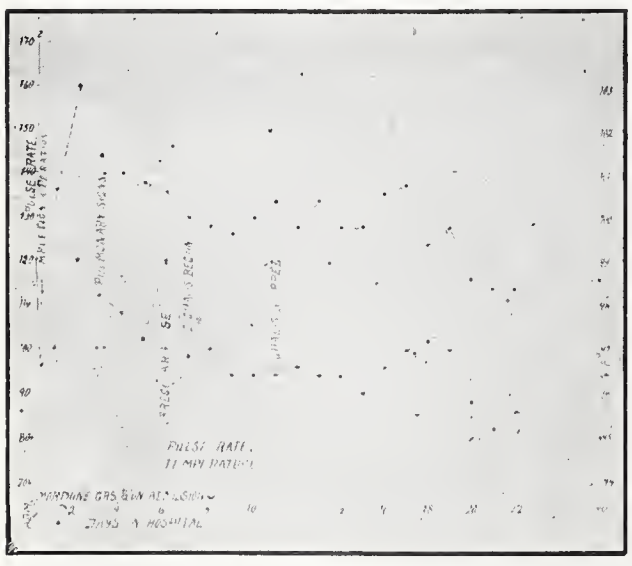


Figure II. Shows the drop of the pulse rate under morphine and the rise in temperature

Operative interference should be undertaken as soon as possible. In deciding upon the type of incision it is necessary to consider the probable extent of the lung injury, the presence or absence of a haemothorax and the probable location of the wound in the heart. In general, the best approach is by a hinged resection of two or more of the costal cartilages. The hinge may be placed either medially or laterally. The exposure must be adequate and for his reason it is better to make the incision too large than too small. With a true heart tamponade there should be no difficulty in identifying the distended pericarium. Its bluish color is reminiscent of the peritoneum in ectopic pregnancy. On opening it the blood and blood clots should be removed by suction and with the gloved hand. Sponging with dry gauze should be avoided for it traumatizes the covering of an organ that must be in constant motion. The heart may be steadied by inserting a stay suture in the apex of the left ventricle, never the right. Twisting the organ, rotating it on its axis, and squeezing produce fibrillation. They should never be practised. Gentle lifting of the heart from its bed causes much less disturbance and will permit inspection of most of the posterior wall.

No great difficulty is ordinarily experienced in the placing of the necessary sutures though the wound may be too close to a coronary vessel for much comfort. (Fig. III). Should one of these vessels be injured it is well to remember that recovery has followed ligation below the main branches but never above them. The wall of the right ventricle is extremely thin and friable. Because of this a small sized catgut suture should be used and the stitch tied with extreme care so that there is just enough tension to approximate the edges and control the bleeding. The needle holes tend to ooze. This might be avoided by using a needle with the catgut fixed in its end or by using a double

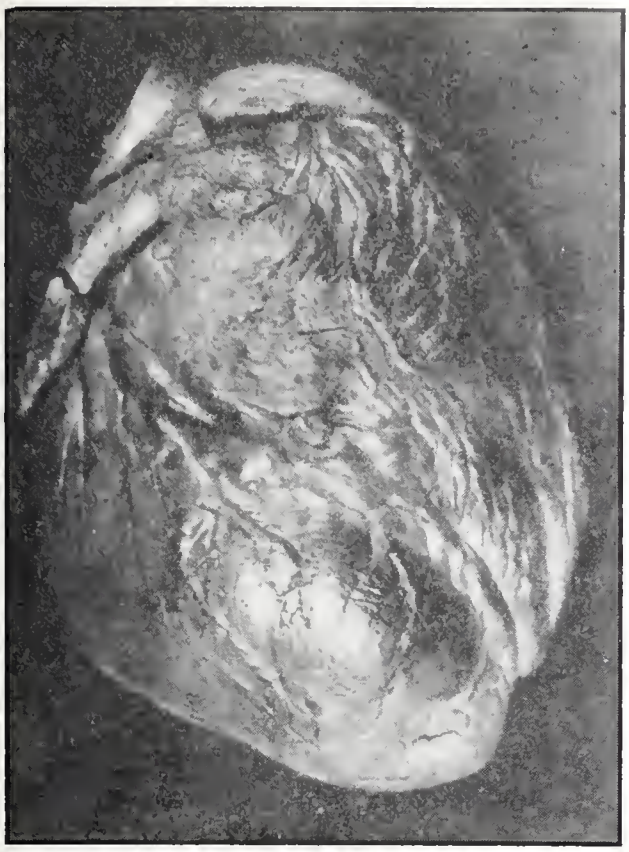


Figure III. The sutures in place and tied. Note their proximity to the coronary vessels

suture. There is also a marked tendency on the part of the sutures to "cut out." In the thick-walled left ventricle a linen stitch which was not allowed to penetrate the endo-cardium would seem to be ideal. In the auricles it is obvious that the same care is demanded as in the right ventricle.

There is much dispute as to the advisability of draining the pericardium. It seems obvious that some provisions must be made for the escape of the pericardial fluid that will form but it is equally obvious that a drain will irritate the moving organ almost beyond endurance. To escape this dilemma about one inch of the lower portion of the pericardial incision was left unsutured in one case. A drain was placed opposite this opening down to the level of the under surface of the costal cartilages but not in contact with the pericardium.

During the operation stimulation may be begun. Intra-venous salt solution may be given or a transfusion resorted to if the loss of blood makes it necessary.

The post-operative treatment may be summed up in one word, morphine. Unless this drug is used in heroic doses there will be a return of the restlessness or delirium and the patient will literally wear himself out. Absolute rest is almost as imperative as the operation itself. Digitalis may prove a valuable aid but theoretically nothing should be done that will increase the strain upon the suture line for instances of secondary blow-out with disastrous results have been recorded.

In each of our patients the pulse was dicrotic in character both before and after operation. In the case that recovered it remained so for more than a month. This was interpreted as one evidence of the embarrassment of the vaso-motor system. In this connection the postoperative blood-pressure readings are extremely interesting. For three days after operation there was a definite hypertension, the highest reading being 162/118. (Fig. IV) If

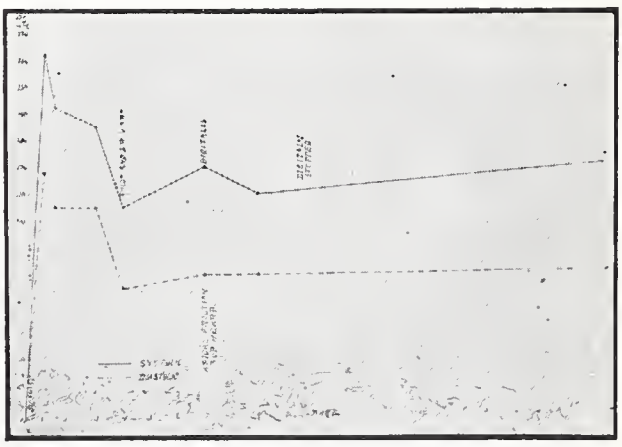


Figure IV. Note the post-operative rise in both systolic and diastolic pressure

similar observations have been made they certainly have not been given any prominence for the only mention of the blood-pressure found in a rather careful search of the literature is by Beck who observed a transitory rise in some of his dogs after the experimental production of tamponade by the injection of salt solution into the pericardium. The hypertension and the dicrotic character of the pulse both seem to indicate that the vasomotor system was interfered with, probably through pressure at the base of the aorta during the period of tamponade. If this be the true explanation post-operative hypertension should only occur in those cases in which a true tamponade has been present and it should be absent in those in

which the pericardial wound has permitted pericardial decompression.

During the convalescence both the blood-pressure and the pulse rate were found to vary in the course of a few minutes. It amounted to as much as 20 beats a minute during a three minute count and to 20 mm. of Hg. in the same interval in the case of the blood pressure. The observation was made repeatedly and was regarded as further evidence of the struggle of the heart and vaso-motor system to reach a normal stability. No extra-systoles were detected at this time.

The complications of heart wounds are many. Pulmonary emboli are probably the true explanation of the most frequently recorded one, namely pneumonia. The condition should be more accurately diagnosed. Intra-cardiac clot produced death in our fatal case. Embolic phenomenae in the general circulation frequently follow wounds of the left ventricle. Infectious pericarditis has been a very common cause of death both during the convalescence and later through cardiac embarrassment from its resultant pericardial adhesions though it is remarkable how little post-operative adhesions seem to bother the organ as compared with those caused by a true adhesive pericarditis.

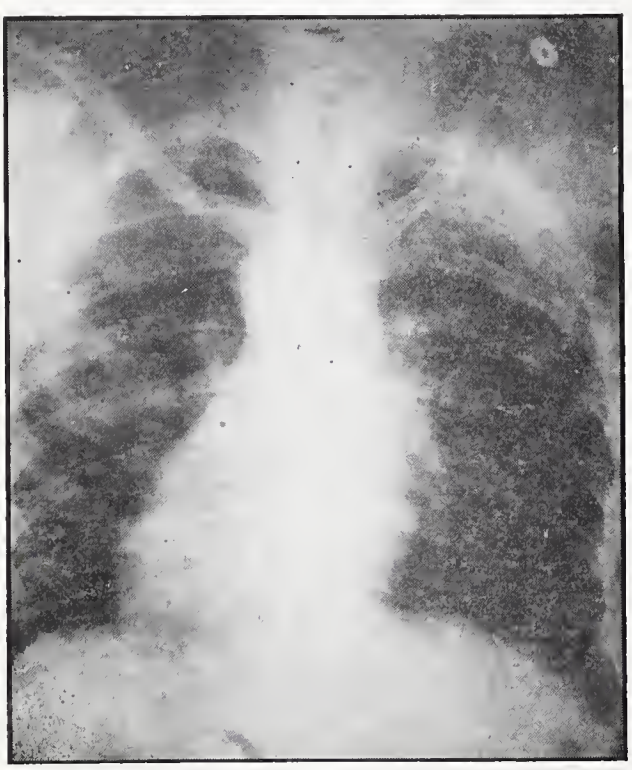


Figure V. Showing relatively normal appearance of the cardiac shadow several weeks after operation

(Fig. V.). Post-operative shock and secondary haemorhage claim a large percentage and there are other less frequent complications.

It is necessary in concluding to emphasize again the importance of morphine. Its post-operative use in sufficient amounts to produce rest, even though the dosage seems beyond all reason, is, in our opinion, essential and its pre-operative use only a shade less important.

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DISCUSSION

Dr. LeGrand Guerry, Columbia: In the first place, I want the essayist to consider that I have paid him all the compliments I possibly could for the very excellent presentation of an extremely interesting case. So far as I know, this is the first successful case of stab wound of the heart that has ever been done in this state. There have been quite a few of them, but so far as I know this is the only successful case of the sort in South Carolina.

I am disposed to be a bit reminiscent and make this remark. Years and years ago, when I was in medical school studying under the essayist's father, the late Dr. Doughty, I was in the dissecting room one afternoon dissecting a heart. Dr. Doughty came in and asked what I was doing. I said: "Some day I am going to operate on a patient with stab wound of the heart, and I want to be prepared to do it." I have been in Columbia thirty years, and there have been three of these cases. One of them was done by Dr. Bunch. That case came near getting well; the patient lived about twelve or fifteen

days and then died of pneumonia. Both of the other cases fell into Dr. Doughty's hands and were operated on by him. That is as near as I have come to operating for stab wound of the heart.

I want to emphasize one of the points Dr. Doughty brought out in his paper—the use of morphin. After operating on this case Dr. Doughty came to me and was discussing it with me, asking my advice; and I said: "Put the man to sleep and keep him that way." It is absolutely impossible, I think, to overemphasize that particular thing. It is as much of a stimulant as a patient will need under these conditions, and it puts him to sleep and keeps him quiet and gives nature the chance she seeks to do the reparative work.

There is one point I wish to emphasize. I wish Dr. Doughty's last picture were on the screen, the picture in which he shows the temperature and pulse, because I think in this point we are certainly up against a problem that applies to the great emergencies in surgery, the great crises in surgery. If I am not mistaken, it is a principle. Of course, it is rather dangerous to get up and state a thing as a fundamental principle, because there are not many of them. But I am just wondering if, in discussing this aspect of the case, we are not in the presence of one of the fundamental principles of reparative surgery. The point is this; if this case had been rushed to the hospital and operated on immediately as an emergency case, with the pulse at the vanishing point, I believe the case would have been lost. The point is this; there are so few emergencies that are so urgent that you have not a reasonable time to protect the patient, to get him in better condition. That, in my opinion, is what saved this patient—the giving of a half grain of morphin. He came in in a practically dying condition but in an hour was put on the operating table and survived. There are few illnesses so critical that you can not take a little time to get the patient in better condition.

There is one thing about the medical management of this case I want to state. Dr. Tolbert was the man who made the diagnosis in this case, and he was so staunch in his diagnosis and so insistent upon operation that he forced a reluctant surgeon to operate. You know that is uncommon. I think Dr. Doughty had quite a question in his mind for a while; still he yielded; and as a result the patient was exhibited to you here this afternoon.

Dr. D. L. Maguire, Charleston: I want to say that I also had a successful heart suture back in 1924. That case was reported in SURGERY, GYNECOLOGY, AND OBSTETRICS in May, 1925. The operation was done at Roper Hospital, for stab wound of the heart. The patient was operated on about one hour after he came to the hospital. In my case the man developed a pleural effusion which I had to drain twice, one about five or six days after the operation, because I tore into the pleura in getting into the mediastinum. We drained off about four or six ounces of straw-colored fluid and then drained again forty-eight hours afterward. During the operation the man's heart stopped completely, and it looked as if he was absolutely going out, but we injected adrenalin directly into the heart muscle, and you could see it pick up and go ahead. That patient was in the hospital for about two weeks. His convalescence was not stormy, and he was discharged in good condition. I have not heard from him in about six months, but the last I heard was that he was a mess-boy on a steamer between here and Baltimore.

Dr. Doughty, closing the discussion: The first case that I saw, as I said, was extremely restless, with this striking pulseless condition. This second case Dr. Tolbert saw and recognized the situation at once. When I arrived he was lying up in bed perfectly rational, perfectly quiet, with a pretty good pulse—entirely different from the first case I had seen; and I think it was perfectly natural that I was uncertain about the operation. Dr. Tolbert told me about his condition when first seen, and cleared away my doubts and we went in.

I think stimulants before operation are definitely contraindicated. After the operation, or during the operation, you can give stimulants as needed. As to the matter of morphin after operation, I found it very difficult to follow Dr. Guerry's suggestion to literally keep the man asleep; it was hard to get the nurses to do it. They were afraid to do it. This man, after coming off the operating table, was given 3-8 grs. of morphine by injections on top of an initial heavy dose. We left him so absolutely alone that it was hard later to get a bowel movement; it was two weeks, literally, before he had a bowel movement.

*TOXEMIA OF PREGNANCY

By H. W. deSaussure, M. D., F. A. C. S.
Lecturer on Obstetrics, Medical College of the State of S. C., Charleston, S. C.

Toxemia of pregnancy may be defined as that syndrome characterized by albuminuria, hypertension and convulsions or coma, appearing in the latter half of pregnancy.

It is a well known, but unexplained fact, that the same condition in a man or non-pregnant woman is not so apt to cause convulsions and coma. An acute nephritis in a normal adult usually runs its course without convulsions, but in the presence of pregnancy, nearly always ends in convulsions and coma.

In the causation of these violent motor and cerebral phenomena, we believe, there is a toxic element,—in some cases there is indubitable evidence of a true toxicosis. These are the patients with true eclampsia, but in the present state of our knowledge we group all cases of convulsions and coma, late in pregnancy, not due to extraneous causes, under the term, "Eclampsia."

Eclampsia, therefore, is not a disease, but the symptom complex of several underlying causes, and before convulsions occur, we have a stage, more or less long, full of symptoms and signs which point to the cataclysm which is pending. This stage is called, "The pre-eclamptic State" and the patient is said truly to be threatened with convulsions.

Barr suggests the word, "ECLAMPSISM" for this prodromal or pre-eclamptic stage and DeLee recommends its general adoption, to include all cases of toxemia in late pregnancy, which may lead, if untreated, to convulsions, coma or both.

We know as little today of the cause of this affection as was known twenty years ago and, therefore, I shall not go into a discussion of the many theories that have been advanced, except to say that the most plausable one is that eclampsism and eclampsia are one form of toxemia, and a physico-chemical disturbance of metabolism occurs, and that some poisons circulate in the blood which cause the general edema; changes in the liver and primarily or secondarily, changes in the kidney and, convulsions by direct toxic action on the cerebral cortex.

The brain shows flattening and moderate edema of the convolutions, sometimes anemic, sometimes congested. Small or large hemorrhages or areas of softening with thrombosis have been seen (Schomrl). Apoplexy is not uncommon, especially into the ventricles.

Perhaps, in the liver the most typical changes are found. There is albuminoid degeneration with hemorrhagic and anemic necrosis. These foci of necrosis are found near the small portal vessels, which are often thrombosed. There is also fatty degeneration of the periphery of the lobules, which may be so marked as to resemble acute yellow atrophy of the liver. There may be a general autolysis of the liver or only cloudy swelling. Hepatitis and perihepatitis hemorrhagica are nearly always present.

In the kidneys cloudy swelling and fatty degeneration of the epithelium are the rule. Thrombosis of the glomeruli and smaller veins and arteries are common—(nephrosis). Evidence of acute inflammation may sometimes be found.

Circulatory System.—The ventricles are usually contracted, the auricles full of dark blood which does not clot readily. The heart muscle is fatty with tiny hemorrhages, necroses and thrombi. Fatty heart is found in those cases which had been given large doses of chloroform and chloral.

Thromboses and emboli in fine vessels are common in the lungs, liver, kidneys, brain and skin. They consist of liver-cells, endothelium and syncytium. The latter, however, has no significance, being found in normal puerperae. Microscopic findings of the blood are not constant. The red cells are sometimes increased and there is a marked leukocytosis.

The lungs almost always show congestion and edema, and very often hemorrhages, usually under the pleura. Bronchopneumonia, due to aspiration, is not unusually found. Septic pneumonia may be the cause of death.

Barr and others have found changes in the fetus which correspond with those in the mother, especially when the child died of convulsions.

The symptoms of toxemia are too well known

*Read before the South Carolina Medical Association, Charleston, S. C., May 9, 1929.

for me to burden you with their recital; but the danger signs of impending trouble should not be ignored, and any patient, in the latter months of pregnancy with a rise in systolic pressure over 130 and albuminuria will bear watching.

With the appearance of the first signs of eclampsism, treatment must be instituted. There are three indications to be met:

(1) The diet should contain enough protein to sustain life, in a form easiest assimilated and that will leave the least waste which throws extra work on the liver and kidneys.

(2) The kidneys should be aided to throw off the excess of poisons in the blood.

(3) The termination of pregnancy is to be considered.

(1) The patient is put to bed and the diet is restricted to fluids for the first twenty-four hours, giving large quantities of water and fruit juices, but no milk. Fresh and cooked vegetables, cereals, breadstuffs, sugar and butter are added on the second day and, as the condition improves animal protein is included in the diet Unless edema is marked, salt is not omitted from the diet.

(2) Excretion by the bowels and kidneys is increased. The bowels are kept open by saline laxatives and mild vegetable cathartics. Violent purgation I believe does harm. The patient is encouraged to drink copiously, particularly water. Medicinal diuretics have no place in the treatment and in my opinion, are irritating to the already damaged kidney.

Sweating is not only dangerous on account of its depressing effect, but inefficient, because very little besides water is eliminated by the skin. Werner and Kolisck having proved that the serum from edematous parts is more toxic than that of the general system, it would be illogical to sweat the patient and cause absorption of these toxins. With the exception of magnesium sulphate and morphine drugs are worse than useless. Venesection is of doubtful utility, as it seldom gives more than temporary improvement of the symptoms.

In 1916 Fischer recommended Magnesium Sulphate for Eclampsia. It is slightly anaesthetic and de-hydrating, reduces the edema of the brain which causes the headache and the convulsions. It is given intramuscularly in 4 c. c of a 50 per cent. solution 2 or 3 times a day in cases where the eclampsism is moderate, this with rest in bed and diet reduces blood-pressure and increases the urinary output, tiding the patient over an emergency, whereby pregnancy may be prolonged to increase the viability of the fetus. When the symptoms have been controlled labor can be induced with comparative safety.

Although Williams, Davis and Edgar claim Eclampsia is preventable, I do not advise continuing the treatment indefinitely, certainly not beyond the 38th week, because as the patient approaches term the danger of convulsions is markedly increased.

(3) The consideration of the termination of pregnancy is practically the treatment of eclampsia. When the patient has had the first convulsion or presents the symptom-complex, pre-eclampsia characterized by headache, mental hebetude, spots before the eyes, bright lights, dimness of vision, photophobia, nausea vomiting and epigastric pain, the time for masterly inactivity has ceased. The mortality of eclampsia is still from 6 to 45 percent for the mother and 20 to 60 percent for the child.

The plan of treatment that perhaps gives better results, with modifications to suit individual cases, was first suggested by Stroganov in 1909, of rest, moderate doses of morphine and elimination. The patient is given 1-4 grain of morphin by hypodermic, and 20 c. c. of a 10 percent solution of magnesium sulphate intravenously, the morphin is repeated in 2 to 4 hours, and the magnesium sulphate is repeated in one to two hours until the convulsions are controlled. If the patient is conscious, water is given freely by mouth, or normal salt solution is given intravenously or under the skin; if the patient shows signs of acidosis, 5 to 10 percent solution of glucose given in the vein is followed by marked improvement.

Following the convulsions, labor pains usually come on; the attendant should stay by the patient and watch the progress of labor. The pains are usually strong and delivery is soon effected, if the cervix is fully dilated the patient is delivered by forceps, if the head is engaged or version and extraction if the head is above the brim.

If labor does not occur spontaneously it must

be induced, the method depending on the period of pregnancy, the patient's surroundings, the condition of the cervix, the presence of complications, such as contracted pelvis, placenta previa and abruptio placenta. As all children die before the seventh month it is only necessary to have enough dilatation for craniotomy and extraction. After the seventh month our efforts should be directed to saving the baby as well as the mother.

Perhaps the simplest method with the least risk of infection, is to puncture the membranes and allow the amniotic fluid to drain away, which is followed in from one to twelve hours by regular and efficient pains, or dilatation may be hastened by the introduction of a bag after rupture of the membranes. When the bag is expelled dilatation may be completed manually and delivery accomplished by forceps or version.

If the cervex is not effaced, is hard and tightly closed, particularly in a primipara, cesarean section is the method of choice with a promise of a live baby and mother. The low cervical operation is to be preferred and done under local rather than general anesthesia.

This treatment in my hands has given satisfactory results. and is the general plan followed in Roper Hospital, where the results in all cases treated from January, 1924 to July, 1928 show mortality of 21.83 percent. for mothers and 32.68 percent. for babies.

DISCUSSION

Dr. Lester A. Wilson, Charleston: I wish to thank Dr. DeSaussure for presenting this paper. It is a subject of vital importance to us, as there are about three hundred maternal deaths in South Carolina each year resulting from the toxemias of pregnancy.

In the treatment of toxemia one should always try to prevent it from developing,—by seeing that patients are free from focal infection,—that the kidneys and blood pressure are normal and remain so throughout pregnancy, and that there is no rapid gain in weight.

If there is evidence of thyroid involvement, I believe iodine administration is certainly beneficial. Recently, I had three cases who previously had eclampsia,—one of whom had lost four pregnancies from this condition. These cases with iodine administration went on to full time without becoming toxic.

Unfortunately, the Van den Berg Test for determining the liver function is not generally understood. I hope in the future that this organ could be satisfactorily tested for its capacity.

In the pre-eclamptic toxemia, labor should be induced when symptoms indicate that such serious complications as convulsions, premature separation of the placenta or myocardial degeneration, nephritis or hepatic degeneration are threatening.

In the treatment of eclampsia one should bear in mind the causes of death and guide his patient away from these dangers. The greatest cause of death in eclampsia is shock. Therefore, the patient should be delivered by the method which would add as little shock to her condition as possible.

To control convulsions morphine and magnesium sulphate are the drugs of choice. The patient should be kept in a darkened room and absolutely quiet.

Elimination through the kidneys and skin may be increased by injection of warm glucose or sodium bicarbonate solution intravenously. The best purgatives are calomel, castor oil and enemeta.

When one has myocardial degeneration to deal with it is difficult to decide when to start stimulation and when to deplete. Digifoline hypodermically is probably the best stimulant. Bleeding is advisable if the blood pressure remains high. I think myocardial degeneration is the most serious complication that one may encounter.

Eclamptic patients are very susceptible to infection, and scrupulous care should be exercised in its prevention. Such complications as hepatic or cerebral apoplexy are almost hopeless regardless of what we may do for them.

Dr. R. E. Seibels, Columbia: The one thing, it seems to me, in the treatment (or rather in the prevention) of eclampsia is the feeding of carbohydrates. I notice Dr. deSaussure suggests a ten per cent solution of glucose. Our experience has been that the intravenous use of twenty per cent solution of glucose in distilled water is less often followed by the reaction of chills and fever than the lower solution. Glucose given intravenously, it seems to us, is a very valuable agent in eclampsia. Several cases in coma, to which we have given it, have come out in four or five hours. In addition, we use from 300 to 500 cc. of physiological salt solution given by hypodermoclysis. The patient is edematous; and that edematous fluid, as Dr. deSaussure brought out, is highly toxic. Therefore the injection of the salt solution I think is of great aid.

Delivery should be attempted, I think, by whatever means the operator is most familiar with and in which he is most skilful. As has

been said, I think we should do that thing to the patient which leaves her with the minimum of trauma, whether it be version or cesarean section or some other method.

There is a type of eclamptic patient who should not be delivered, and that is the patient with cardiac failure. She should be left alone, just as any cardiac case is left alone, until that heart is compensated. That patient should be kept quiet and given digitalis but should not be delivered artificially.

In the hyperemesis cases, they can be practically one hundred per cent. cured by the use of glucose intravenously, rest, and being told they are not going to be aborted. In my experience, ninety per cent. of the cases of so-called toxic vomiting do not wish to have a baby. If we can assure those patients they are going to have glucose intravenously and salt solution through the skin every eight hours until they stop vomiting, generally they stop after the second treatment.

Dr. John F. Townsend, Charleston: In some instances the onset of convulsions in a case of toxemia of pregnancy comes on without very many other symptoms except that of high blood pressure. The laboratory findings are fairly negative, so high blood pressure is looked upon as a symptom that needs careful watching. In two cases seen recently the eye-ground examination showed, in one case, slight symptoms of toxemia of pregnancy, and the suggestion was that it should be watched. The other case, which, by the way, had the higher blood pressure, showed an essential arteriosclerosis, which accounted for her high blood pressure and made us disregard the high blood pressure as a basis of the symptoms; and the case was discharged from observation until near the time of delivery, when she was brought in and delivered. The point is that the arteriosclerosis may sometimes be on the basis of the high blood pressure, rather than the toxemia of pregnancy. Therefore, cases of high blood pressure due to arteriosclerosis do not need watching, as do cases of high blood pressure due to the toxemia of pregnancy. In the case of high blood pressure due to the toxemia of pregnancy the blood pressure will go down after delivery. We frequently find that it goes down before the patient leaves the hospital, but not necessarily so. But the blood pressure does not go down after delivery in the cases whose high blood pressure is due to the arteriosclerosis. At my examination of the ocular fundus I also state whether the blood pressure should or should not go down after delivery.

Dr. deSaussure, closing the discussion: When you start discussing the toxemia of pregnancy you start on a discussion that is endless.

With reference to what Dr. Wilson said about the toxemia of pregnancy, I believe the pathology is primarily in the liver and not in the kidney. I believe the changes in the kidney are always secondary to whatever the causative factor in the liver may be.

I cannot agree with Dr. Seibels that the routine administration of a large quantity of glucose intravenously is a good thing, because in those cases that are markedly edematous it is likely to produce more edema, especially edema of the lung. I do not believe any good is accomplished by the administration of glucose unless there is acidosis.

Blood pressure, of course, is one of the best indications of what is going on. I thoroughly agree that in a patient with high blood pressure labor should not be induced until that blood pressure is brought down somewhat. In other words, treat your patient with eclampsia as you would a patient in shock, and do not attempt to deliver the patient until that pressure is brought down.

A PUBLICITY BUREAU FOR OUR STATE HEALTH DEPARTMENT

By G. T. Tyler, Jr., M. D., Greenville, S. C.
Chairman Committee Public Health and Instruction S. C. Medical Association

The State Health Department is an educational institution. Not only must it undertake sanitary and curative measures; but it must also employ means for preventing disease. In fact, within the last decade, prevention has been the slogan of all health boards. Educating the public in health-conservation is the duty of the departments of health. It is the surest means of disease prevention, and by far the most satisfactory method of bringing to the lay mind the necessity of following health laws.

A publicity bureau in the State Health Department can educate the citizens of the state. By means of health literature sent at regular intervals; by use of the press, daily, weekly, church, and secular; by arranging courses of instruction in the normal schools and in colleges where teachers can be given health-knowledge; by charts, illustrated lectures before schools, clubs, and churches; by moving pictures; by radio, the knowledge of health can be disseminated from a reliable source, in an authoritative manner. Such information is de-

pendable. No physician, nor group of physicians is benefitted thereby: it comes in the name of the State to all its citizens.

It was recommended at the last meeting of our State Medical Association that each county society devote a meeting to this subject, inviting its representatives to the Legislature to meet with them. The need and value of a publicity bureau in the State Health Department presented to the legislators in each county will go far toward influencing legislation favorable to the idea. When the funds needed are asked for, the legislators will be familiar with the subject.

Greenville county had such a meeting in September. Dr. Hayne, of our Health Board, and Dr. Laughinghouse, of the N. C. Board were with us, as well as some of our legislators. The need of a publicity bureau was ably presented. If similar meetings can be held by other county societies, there will be little difficulty in convincing the Legislature that appropriation for this purpose is money well spent.

In North Carolina, the value of the bureau has been demonstrated. Every expectant mother is sent a letter each month of her pregnancy telling her how to care for herself, and urging close cooperation with her physician. The mother of every new-born baby is sent letters and circulars, instructing her in the care of her child during the first, second, and later years. A monthly bulletin is sent to every citizen who will take the trouble to write for it. Besides this, charts and large posters are supplied to schools, showing how disease is conveyed, and how prevented. Papers on sanitation are also supplied. This bureau is a health-education department. Dr. Laughinghouse writes: "We have every reason to believe that it has taught the people the necessity for vaccination. It has been of incalculable help in the passing and enforcing of sanitary laws. It has been our right arm in teaching the necessity for screening houses, and keeping the premises policed; and publicity by our State Board of Health, and by our educational machine has done incalculable good in instructing school children.

"For the past three years we have been bending our efforts toward impressing mothers and fathers and doctors of the necessity of finding and correcting the physical defects in pre-school children. We feel that our publicity activities have done much in this regard.

"Lastly the press of this State has been particularly kind to us, until the people look for such information as would naturally come from a health department. The people accept it. In fact they are hungry for it; and our only complaint is that we haven't more money to put into this most necessary undertaking."

The results obtained by the N. C. Board's publicity bureau lead us to expect that we can accomplish like results—PROVIDED OUR MEDICAL SOCIETIES WORK FOR THE BUREAU.

DR. THOS. BROCKMAN

ANNOUNCING THE REMOVAL OF OFFICES TO COLONIAL APARTMENTS, NUMBER 25 EMMA STREET, GREER, S. C. THE ESTABLISHMENT OF A MORE COMPLETE RECTAL CLINIC, WITH X-RAY AND CLINICAL LABORATORIES. BETTER PREPARED TO EXAMINE, ACCOMMODATE AND TREAT CASES WITH COLON AND RECTAL DISEASES. RECOVERY BEDS FOR AMBULANT PATIENTS. SURGICAL CASES HOSPITALIZED AT THE CHICK SPRINGS SANITARIUM.

EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M. D., F. A. C. S., CHARLESTON, S. C.

CARE OF TONSILLECTOMY PATIENT

By Dr. J. B. H. Waring, Eye, Ear, Nose and Throat Monthly, September, 1929

The treatment of a post tonsillectomy case is always one of great importance. Dr. Waring advises the use of calcium routinely as a pre-operative preparation. (Some people may agree but some have found that it has not proved very satisfactory). He also advises in cases with markedly sclerosed vessels the giving of a pre-operative dose of fibrogen.

He uses the suction tonsillectomy method.

The taking of coagulation time has been dispensed with as of uncertain value. (I think it a good plan but I have found cases with prolonged coagulation at one time and with a perfectly normal coagulation ten days later). Alkalinization with milk of magnesia or some other suitable alkali seems of definite value prior to operation, especially in those markedly toxic. (Some find it of definite value immediately post operative).

Operation in the morning is preferred; children are given water or bouillon in lieu of breakfast. Adults are encouraged to eat their usual breakfast, for local anesthesia operation.

He uses Ether by the drop method with an automatic drop device with plenty of air admixed.

At completion of operation, the patient is returned to bed, placed on right side and mouth kept on pillow somewhat downward so that any blood or saliva drools from the mouth by gravity. There is plenty of mucus and saliva as a rule, but little blood except from adenoid operation. Nothing is given by mouth for two or three hours; then sips of cool water or cracked ice; gradually increased to full amount desired. Cold milk; ice cream; cracked ice is diet for first 24 hours and a shift from liquids to semi-liquids gradually made from second day on; bland and unirritating diet. Patients are kept in bed and as quiet as possible for first 24 hours or longer, if practicable.

He gives pre-operatively in cases of local anesthetic, three grains of luminol by mouth, swabbing the throat with 5% cocain until the gagging reflex is abolished. He gives an injection of ½% Novocain; 1% Antipyrin; 1% (1-1000 Adrenalin. From 10 to 15 cc. of this solution is employed as a rule. He injects it pretty generally around the tonsils. In the Journal of the American Medical Association, Sept. 21, 1929, pg. 905, Dr. S. E. Roberts writes of a kind of cocain intoxication or tetany in intranasal operations. He advises parathyroid extract Collip 5 cc., containing 100 units subcutaneously.)

Dr. Waring advises having the patient put their head down in case of dizziness or any unpleasant feeling from the cocain.

He improves the mental attitude of the patient by showing them what is to be done and reassuring them so that they are not frightened by any of the things that may happen in the operation. That I think is an important point.

The tonsil fossa should be carefully examined post-operatively as to the presence or absence of lymphoid tissue. No suction cleansure is ever employed in a fossa after removal of the tonsil; but unless absolutely dry the fossa is lightly swabbed with a cotton swab and search made for any possible oozing spot.

He finds that the hemorrhage may be controlled by the pressure of a homostat, saying that ligature is rarely necessary. (Personally I prefer using a ligature in case of doubt).

No pus basins are kept by the patient and he or she is admonished not to clear the throat or try to expectorate; to simply lie in position and let saliva drool by gravity.

For pain he advises Morph. S. 1/32 in a half teaspoonful of elixir lactopepsin diluted in water, to be held in the side of the mouth. This dose every 3 or 4 hours insures a minimum of

pain and discomfort, without the narcotic effect of larger doses of morphin. Very few patients call for more than 2 or 3 doses of this medicine; in fact many never take any at all, saying their throat is more stiff than painful.

He also advises the use of powdered aspirin, gr. 1 ½ to the spoonful of alkaline Petrolagar, given every hour as needed; the oiling effect of the Petrolagar along with the pain relieving effect of the aspirin, is very gratifying.

Cold water and cracked ice, milk and ice cream is the diet for the first 24 hours.

After that they gradually work back to a semi-liquid and then full diet as the condition of their swallowing apparatus seems to justify.

He seems to think that the Kromayer lamp has a tendency to hasten the healing process.

MINUTES

To the House of Delegates, South Carolina Medical Association.

From the Committee on Public Policy and Legislation.

Gentlemen:

No bills were introduced during the last session of the Legislature that were related to Chiropractors. They are practicing full sway, unmolested, unlicensed and illegally in our State. The city of Columbia, and I suppose other cities, charge them a revenue license to practice in their municipalities. The chiropractors of Columbia boldly pay their license and sign an affidavit that they do not make more than $3000.00 a year and they are charged the minimum fee which is $25.00. I do not blame the cities because they need the money,—it is up to the State to enforce the State laws and see that practitioners are properly licensed.

I will mention hurriedly some bills which were introduced which may be of interest to organized medicine in South Carolina.

1. Three new County Health Units were provided for this year which makes a total of 26 counties in our State which have County Health Units.

2. A bill was introduced to rearrange the examining Board for Opticians and Optometrists. The Bill passed and the law now provides for an examining Board of three Optometrists, one Physician, and one Oculist who is a licensed M. D.

3. Some effort was made to legalize licensed druggists to handle wines and liquors for medicinal use. This bill did not pass.

4. Another bill required textile manufacturers to install sewerage systems in their mill villages within the next two years. This bill passed and is now a law.

5. A bill which declared it unlawful for institutions hospital, etc., caring for sick or injured persons for pay to use pupil nurses on special private duty in pay cases. This bill failed to pass.

There were a number of other local county bills that were not of state-wide interest.

Our Secretary-Treasurer, Dr. Hines, drew it to the attention of the chairman of the Legislative Committee that our State Association was sponsoring a bill that had to do with expert medical testimony. As this bill had originated in Charleston I wrote to Dr. Cathcart who replied that the matter was being taken up with Mr. Arthur Young, President of the State Bar Association, who would prepare and have the bill introduced. The bill evidently, as far as I am able to find, was not even introduced, and I feel certain did not pass, for the Secretary of State who keeps a copy and indexes all bills informs me that he does not have the bill indexed. If anyone knows the status of the bill we would appreciate any information they can furnish on the subject. The legislative committee would have had this bill written and introduced had we not been assured that this was not necessary.

The Nurses bill will be reintroduced next year by the same authors who introduced it this year. If the House of Delegates cares to make any suggestions or recommendations it might be advisable as a guidance for the legislative committee next year.

Last year Dr. Thos. Pitts of Columbia made a suggestion to the House of Delegates that physicians be re-examined periodically to perpetuate their license to practice medicine within our State. His idea, I think, was that the law, of course, would not be retroactive, therefore, everyone practicing at the time this measure became a law would be exempt from this periodic examination. The periodic examination would occur, say at five year intervals, and the details of the examination could be worked out by a committee who would recommend the law to our legislature. In lieu of the examination a certificate of having satisfactorily at-

tended and passed certain tests at least once during the five years at the Post Graduate course in Charleston might be instituted as equivalent to one of these examinations. (Not adopted by House Delegates. Ed.)

The only new legislation that the Legislative Committee would like to recommend and have the House of Delegates endorse at this session would be to sponsor in an energetic way a law requiring a clean bill of health for marriage. We also recommend that the House of Delegates go on record as favoring venereal prophylactic packages or even prophylactic stations for civilians as were carried out for soldiers during the war. As I see it, there are five legislative matters that should be discussed:

Nurses Bill.

Expert Medical Testimony Bill.

Clean Bill of Health for Marriage.

Venereal Prophylaxis Bill.

Five-Year Periodic Examinations to Relicense Physicians.

Respectfully submitted,
Marion H. Wyman, M. D., Chairman,
Committee on Public Policy and Legislation.

SOCIETY REPORTS

FOURTH DISTRICT MEDICAL ASSOCIATION MEETING, CENTRAL, S. C., OCTOBER 10, 1929.

Program

Invocation—Rev. Brooks, Pastor Methodist church.

Address of Welcome—Hon. G. M. Perry, Mayor of Central.

Greetings—Dr. L. G. Clayton, Central.

Response—Dr. E. A. Hines, Seneca.

Titles of Papers for Fourth District Medical Meeting

1. Reflex Symptoms of Various Types of Pathology Occurring in the Terminal Bowel—By Dr. Granville S. Hanes, Louisville, Ky.

2. A Publicity Bureau for Our State Health Department?—Dr. G. T. Tyler, Jr., Greenville, S. C.

3. Obesity Associated with Deficiencies of the Enterdermic Viscera—Dr. George R. Wilkinson, Greenville, S. C.

4. Embeded Ureteral Calculus with Report of Cases—Dr. H. M. Daniel, Anderson, S. C.

5. Allergic Manifestations In the Nose—Dr. T. R. Gaines, Anderson, S. C.

6. Diagnosis and Treatment of Chronic Cholecystitis—Dr. L. H. McCalla, Greenville, S. C.

7. A Practical Discussion of Some Nasal Sinus Problems. Slides—Dr. E. W. Carpenter, Greenville, S. C.

8. A Larger Outlook for Future Activities of the State Medical Society—Dr. E. A. Hines, Seneca, S. C.

9. The Climacteric—Dr. J. Decherd Guess, Greenville, S. C

LUNCHEON—2:00 P. M.

Officers

Dr. E. C. Doyle, President, Seneca, S. C.

Dr. W. A. Strickland, Sec.-Treas., Westminster, S C.

NEWS ITEMS

The October meeting of the Spartanburg County Medical Society had as its guests Dr. L. B. McBrayer, Secretary of North Carolina State Medical Association and Dr. J. T. Burrus, Ex-President of the North Carolina State Medical Association. These gentlemen came to South Carolina to talk on organized medicine.

The Greenville County Medical Society will hold a joint meeting with the Dental Society in November. Their guests will be Dr. Kenneth M. Lynch of Charleston and Dr. Sam Silverman, D. D. S., Atlanta, Georgia. The meeting will be celebrated by a banquet and the usual large number of guests will be present of surrounding counties.

The Fifth District Medical Society holds its meeting under the Presidency of Dr. W. E. Simpson at Rock Hill, October 31. The program is an unusually interesting one. Several distinguished visitors will be present.

Dr. J. H. Cutchins was elected to membership in the Pickens County Medical Society at the last meeting, September 4.

Dr. Chas. C. Harrold, Macon, Georgia, and Dr. Wm. Shearouse, Savannah, Georgia, have been appointed Fraternal Delegates by the Georgia State Medical Association, to attend the next annual session of the South Carolina Medical Association to be held at Florence in May, 1930.

DRUG ADDICTS

Drug and Alcoholic patients are humanely and successfully treated in Glenwood Park Sanitarium, Greensboro,, N. C.; reprints of articles mailed upon request. Address

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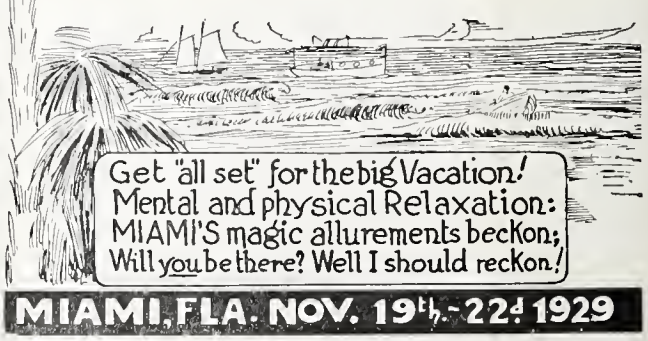
IN the South, OF the South, FOR the South

MEDICINE and SURGERY in every phase will be covered in the general and clinical sessions and the twenty sections and conjoint meetings making up the program for the Miami meeting—modern scientific medicine brought up to date. Unique and unusual entertainment and recreational features—golfing, boating, swimming, fishing, hunting, trap shooting or whatever is the favorite sport or recreation. A meeting that will EXCEL—Miami, November 19-22.

AFTER MIAMI, CUBA. Perhaps never again will there come to physicians in the South such an opportunity to see Havana and Cuba under circumstances so favorable and at so low a cost. Entertainment that will charm, in this "lovely land of Cuba," has been arranged.

ARE YOU A MEMBER of the Southern Medical Association? If not, you should be and can be if you are a member of your county and state medical societies—that is the only necessary requirement plus $4.00 annual dues which include the Association's own Journal, the Southern Medical Journal—the equal of any, better than many. "Here 'tis again, my check for $4.00 in payment of my dues for another year—the best investment of the year," so writes a prominent physician of North Carolina. You will EVENTUALLY make that "best investment"—why not NOW?

SOUTHERN MEDICAL ASSOCIATION
Empire Building
Birmingham, Alabama



MIAMI, FLA. NOV. 19th-22d 1929

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OF THE

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EDITORIAL

SOME FURTHER NEWS ABOUT THE FLORENCE MEETING, 1930

The Scientific Committee at its recent meeting decided to make the subject of Tuberculosis one of the important features of the next annual meeting. At the present time efforts are being made by the State Board of Health, by the South Carolina Tuberculosis Association and by voluntary agencies to stress the urgency of the tuberculosis situation in the State. There are probably not half enough beds available in all the hospitals combined for even the incipient cases. The campaign has been greatly activated in recent months by the Masonic Fraternity. This organization is now erecting an additional building at State Park at a cost of fifty thousand dollars. Another building was completed a year or so ago.

Every effort will be made by the Program Committee to cover all the important phases of Tuberculosis by outstanding speakers. In this connection it will be gratifying news that Dr. A. E. Parks Professor of Pediatrics at the Johns Hopkins Medical School, has accepted the invitation to speak on Tuberculosis of Children. It is probable that Dr. Park will also conduct a clinic on some Pediatric subject.

We are looking forward with the keenest pleasure also to the visit of the President Elect of the American Medical Association, Dr. William Guerry Morgan of Washington, D. C. Many other good things are happening pointing toward a record breaker from every standpoint in the metropolis of the Pee Dee.

We wish to call special attention to the one hundred per cent membership drive now going on by the Florence County Medical Society in cooperation with the Officers of the State Medical Association. Indications are that the influence of this membership campaign will extend to all the surrounding counties. It is not too much to hope that under the inspiring lead-

ership of Dr. Charles R. May of Bennettsville who has made increased membership one of the special features of his administration that by the time we meet at Florence every County in the State will show gains of membership. We believe that the entire organization should get behind the President in this matter. He has in season and out of season visited many sections of the State making appeals for this and other laudable enterprises of the State Association. The impression prevails, judging by reports, especially from the large and enthusiastic meetings of District Societies recently, that we are making admirable progress in all directions.

SPARTANBURG SOCIETY SETS GOOD EXAMPLE

Under the Presidency of Dr. S. O. Black, the Spartanburg County Medical Society, has during the year a good record for many enthusiastic meetings. One of these was held on the evening of October 25. To this meeting there were invited with the avowed purpose of arriving at a better understanding between the members of the medical profession and the public, members of the City Council, the Officers of the Chamber of Commerce, civic and social leaders, Trustees of the County Hospital, and members of the Board of Health. Many medical visitors from neighboring counties were observed in the audience. The invited guests included Dr. J. T. Burrus, Ex-President of the N. C. Medical Society, Dr. L. B. McBrayer, the Secretary of the North Carolina Society, both of whom spoke along the lines of more efficient service to the public by the profession and by the hospitals. Both suggested that the County Medical Society by more effective organization held the key to much greater things in a professional way. Among the other speakers were Dr. G. T. Tyler, Jr., Chairman of the Committee on Health of the State Medical Association, who presented the claims of the proposed Department of Publicity for the State Board of Health. We feel that similar meetings should be held throughout the State at more frequent intervals. The medical profession should take into its confidence the public as well as the officials of voluntary health organizations at stated meetings held for this purpose. By so doing vicious forms of practice may be thwarted or at least greatly modified.

ORIGINAL ARTICLES

*CREEPING ERUPTION—LARVA MIGRANS

By F. K. Rhodes, M. D., Florence, S. C.

This is a skin disease said to be common in Russia and Arabia and uncommon in North America.

It was first described by Lee in 1874. One case has been reported in Manitoba, two cases in North Dakota (1913), quite a number in Florida, and along the Mexican border, also on the coast of New Jersey, and more recently several cases have been reported from the Gold Coast. It is probably very much more common in this country than one would suspect from the records. In my practice this summer I have seen six cases in and around Florence. This number is somewhat larger than I am accustomed to see although I have seen a few cases from time to time for several years.

The supposed rarety of this disease in this locality and the frequency with which I have seen it, explains why I am presenting this subject.

Creeping eruption is due to a parasite resembling the larva of a fly. It is 1 mm in length divided into 10 segments. The head end has two suckers and the tail end is bifurcated. It is considered the larva of the botfly of genus Gastrophilus. In some cases it is said to be traced to the migrating larva of hypoderma boris or hypoderma lineatum. Wandering hook worm larvae have been credited as a possible cause. The exposed part is usually the affected part. Of the six cases in my series this summer, five had their feet affected.

The characteristic feature of the disease is a burrow in the skin shown as a slightly elevated serpiginous red line 1/8 to 1/6 inch in width. The burrow reminds one of the burrow made by a ground mole.

The speed at which the larva extends the burrow varies from a fraction of an inch to several inches in 24 hours, mostly at night.

The characteristic symptom complained of is itching, and this is worse at night due to the fact that the burrow is being extended at this time. The itching is so intense until the patient is kept awake at night.

We are sometimes enable to see the larva by pressing on the advancing end of the burrow with a piece of glass. (I have never seen it). It shows up as a dark spot. The larva has been removed by cutting down into the burrow, but it is difficult to accomplish this. Usually one larva is present but sometimes two or more. A few years ago I had two patients affected with this disease come to my office at the same time—father and baby. The father had both feet infected with a large number while the baby had so many that it would have been difficult to count them. The buttocks and the legs were covered. The itching was so intense that the scratching had produced sores and infection. These two cases came from just outside of the city of Florence. I have never seen or recognized a case in the colored race.

Of the six cases seen this summer five were children and one an adult.

The five children had their feet infected. One also had a hand infected. The man had his infection in the axillary region. Two of the cases lived within the city limits while the other four lived outside in different directions. No two of these cases were from the same family or from within the same neighborhood. Three were males and three were females. None of the six cases came from the strictly lower classes while four came from good homes where children were well cared for.

The treatment as given by various authorities may be given as follows:

1. Excision of advancing end and removal of larva.

2. Stelwagon who reported five cases introduced Bi-Chl-Mercury (2 grs to 31 ½) by

*Read before the Florence County Medical Society, Florence, S. C., October 8, 1929.

cataphoresis over the advancing end and then applied nitric acid. He was successful with this treatment but thinks the nitric acid did the work.

3. Chloroform applied for ten minutes several times daily from a partly filled test tube inverted over the advancing end has been recommended by some.

4. Hutchins injected a few drops of choloroform into the advancing end with success.

5. My first case seen several years ago was treated by injecting a solution of potass permanganate. One injection cured the case but caused some sloughing at point of injection.

6. This summer I used metaphen injected into and around the advancing end and succeeded in perfecting a cure.

7. The easiest and most satisfactory treatment I have used is ethyl chloride. Freezing of the advancing end for a few minutes is almost certain to give success. If the advancing end is in the sole of foot it may be necessary to wait until it reaches the side of the foot, as it seems to be more difficult to check it in these parts.

As you have seen I have told you little if anything new about this disease and the only excuse I can offer for presenting this paper is to impress upon our minds the fact that this is not only a Russian disease and an Arabian disease, but it is also an American disease, a South Carolina disease and a Florence disease.

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*REFLEX SYMPTOMS OF RECTAL AND COLON DISEASES

By Wm. E. Applebaus, M. D., Louisville, Kentucky

The old proverb "Great oaks from little acorns grow," the postulates of which have been one of the corner stones in the foundation of modern philosophy applies in principle to scientific medicine just as soundly as it did to the old world logic.

The clarion cry of intelligent physicians "Find the cause and remove it" is in reality the prime reason for the recent rapid development of medical progress.

The minuteness of structure and highly specialized physiological function of the finest of all machines (the human body) depends upon the intricate correlation of every cell. The slightest deviation of any one function has a direct and telling effect on some other activity. This effect may be so slight that it is not noticed until the accumulative effect of years disfunction begins to assert itself or it may be prompt and disastrous depending upon what type of tissue or organ it is affecting.

Ours is a great interdependent and intercorrelated body upon which every physical assault or disease insult registers a lasting impression on some structure. There is no separate, distinct or isolated function. Every one either stimulates or inhibits some other activity or prepares the soil for other activities to thrive.

Modern medicine does not seek out gross well-defined disease symptoms but is everlastingly seeking the primary cause or physiological deficiency that predisposes to the ailment and corrects this.

The theories concerning syphilis, malaria and diabetes were elaborately and multiply confusing and each rather plausible, until the exact causative factor in each was discovered.

When the cause of cancer is ultimately discovered it will more than likely be some simple process that will be easier to prevent than cure.

The remote control so to speak of one disease or disfunction upon other disorders, while in many instances not quite plausible to the lay mind, is a definite certainty.

No one function or structure is an entity in itself in so far as being unrelated or uninfluenced by other functions. Even systems depend on the other systems, bodies on other bodies, worlds on other planetary satelites.

The pendulum of medical progress is gradually swinging from the recent surge of separate isolated specialism, where each doctor treated his own narrow field as a local distinct entity in itself; to the more sound present tendency for each specialist to view his subject in the broad terms of its relation to general health.

While this principle is true in all medicine, its significance is magnified when we begin to

*Read before the Fourth District Medical Association, Central, S. C., October 10, 1929.

consider the diseases of the rectum and colon in their relation to remote disorders.

The affections of these parts, which have heretofore occupied a place in the medical curriculum only relatively superior to their lowly position in the gastrointestinal tract, have recently been found to be literal "acres of diamonds" in the production of reflex and toxic symptoms that far out-balance any temporary local symptom in so far as the general well being of the patient is concerned.

In considering these structures from the standpoint of remote symptoms we must appreciate that we are dealing with two sets of nervous controls. Those structures above the anorectal zone which are supplied by the sympathetics and the anal canal which has both the sympathetic and cerehospinal innervation.

The cecum and transverse colon are both supplied by Auerbachs plexus, the splanchnics and vagus. The upper portion of the cecum, transverse colon and descending colon are supplied by nerves from the lumbar spinal cord, the fibers of which emerge from the four upper lumbar nerve roots, enter the lateral chain of the sympathetics and then go to the mesenteric ganglion from which fibers are sent to the solar plexus and also along the course of the colon.

The rectum, sigmoid and descending colon are supplied by the pelvic nerves which take their origin from the sacral cord and pass into the pelvic plexus, which is connected with the inferior mesenteric plexus through the hypogastric fibers and end in Auerbachs plexus.

If it is possible for disease of the gall bladder, appendix and kidney, acting through the vagus, to produce reflex disturbances in the colon and upper digestive tract it is not plausible to assume that there is an equally clear pathway for reflexes of the colon and lower rectal pathology to reach these self same structures through the same nerve routes.

The sympathetic system of the colon, sigmoid and rectum is very extensive and has ganglia distributed throughout the cord which send fibers to organs generally over the body and when the colon is diseased it produces many distant symptoms of nervous type. This readily explains the aphorism "neurotic" applied to persons suffering from rectal and colon disease, who complain of everything including inorganic heart disease, indigestion, gastric hyperacidity, pains in gall bladder, aching in back, shoulders, etc.

In many cases after the removal of an appendix and the patient continues to have symptoms of appendicitis as before, we realize that not enough thought has been centered on the possibility of the large bowel being primarily the offending member. Jacobi, Cannon and Starling, quoting from White, found that stimulation of the sympathetic produces inhibition of the movement of the whole colon, with tendency to constant contraction, but conversely stimulation of the terminal nerve endings in the bowel produced a spasticity of the external lumbar muscles together with a spasticity of the muscles, particularly the circular fibers of the transverse colon. Hence the explanation of the common symptoms of lumbago in spasm of the transverse colon and the natural result in the colon of irritation to the sympathetic system.

It does not seem reasonable to attribute the rapid cessation of a spasm in a child following results from an enema, to the removal of toxic products alone. It is equally obvious that the results in certain types of headache that are instantaneously relieved by an enema or gastric lavage are far too prompt to be entirely toxic in origin.

The more recent tendency of the profession to explain various distressing reflex symptoms from disorders of the large bowel to remote structures, by the blanket and vague term "spastic colon" is an intimation that we have awakened to the realization of the importance of these ailments and may discover in our future studies that these reflex manifestations may be more to blame in producing local and constitutional ill health than any toxic symptoms which we have heretofore considered all important.

Just what effect ptosis, angulations, ulceration, diverticuli, tumor masses within the lumen and adhesions of the colon have on the sympathetic system is still confined to the field of clinical conjecture.

The bulk of our knowledge of the diseases of the colon is obtained from X-Ray studies and animal experimentation and is still in the

formative state, while our understanding of the affections of the rectum and lower arm of the sigmoid is far more advanced due to our ability to observe these structures with instruments and treat them locally.

Pathological conditions of the sigmoid such as chronic inflammations, ulceration, diverticuli, angulations or tumor masses are often overlooked in a general examination because the pain or soreness is reflected to the left inguinal or illiac region and a positive diagnosis of tubal or ovarian disease is made from these typical symptoms. This is the type of patient who, after a long period of local gynecological treatment, finally submits to surgical measures only to continue to suffer as before.

A chronically loaded sigmoid resting on the returning ovarian vein may cause congestion of and ultimate disease of the left ovary.

We have many times observed low grade inflammatory states with marked spasticity in the sigmoid to be the cause of a chronic backache and simple dilatation with the sigmoidoscope and the application of some soothing, non-analgesic medicant relieve this condition promptly.

We recently saw a man who had suffered from a chronic backache for several years. He had been to several of our best nationally known clinics. Every type of diagnostic study was made except proctoscopic. Only once was a low digital examination made of the anal canal. Various braces had been applied and all forms of physiotherapy and massage had been employed but he obtained no relief.

A sigmoidoscopic examination revealed a rather large pedunculated adenoma above the rectosigmoidal junction. After this was removed his backache ceased promptly.

We have had many cases of dysmenorrhea for which no gynecological cause could be assigned, be completely relieved when spastic or inflammatory rectal and sigmoidal states were cleared up.

As a rule pathology in the anal canal produces subjective symptoms which greatly aid us in our diagnosis. However, various types of disease may exist in the rectum, that produces slight or no symptoms to the local parts, but whose reflex manifestation is very marked.

Twenty years ago Hanes called attention to the close interrelation of rectal disease and urinary disorders. His observations at that time were based on cases on which he operated for rectal complaints with subsequent relief of irritable urinary disturbances. Today many urologists believe that irritable conditions of the bladder, where careful examination reveals no pathology in the genitourinary tract are reflexly due to rectal diseases.

I am sure that every surgeon has had the similar experience of having patients upon whom they had operated for ano-rectal pathology return later and relate the cure of some genitourinary disturbance from which they had suffered for years and neither patient nor doctor associated the two ailments prior to rectal treatment.

The intimate anatomical relation in the spinal cord of the nerve centers, and close proximity of the anus, rectum and sigmoid to the genitourinary tract explains much of the joint symptomology in these structures both reflexly and by direct irritation.

Anal fissures are notorious for the production of reflex irritability of bladder and urethra, pain in the perineum, pains in the legs, and low-back pains. We have had cases where simple anal fissures caused complete retension of urine.

The bearing-down pain of hemorrhoids and polypi are frequently reflected to the uterus in the female, prostate in the male, to the back, hips and down the legs.

The removal of the coccyx for severe neuritic pains in this area is like throwing water on the ends of the flame. In nearly every instance the pain is either referred from some rectal pathology or due to a low grade periproctitis in the soft structures around the bone.

I recently reported three cases of priapism in which urologists had found no trouble in the genitourinary tract but which were relieved when deep-seated, diseased conditions of the rectal and perirectal tissues were cleared up.

There is still another class of rectal disease that is scarcely mentioned yet its effect on general health and remote disorders is proportionately more disastrous than the readily recognized gross disorders. These patients complain of no definite symptoms referable to the rectum.

Infection of the perianal and perirectal tissues with no gross complicating lesion is without a doubt the most confusing of all affections in the rectal outlet. If there is a fissure, ulcer, hemorrhoids, stricture or any tangible lesion present there is then an unmistakable reason for local and other symptoms but when patients complain of most severe unclassified symptoms and nothing can be found that may account for them it is then that we lapse into the use of such vague and meaningless expressions as nervousness, functional disturbance, etc.

Whether any of the ordinary gross lesions that are observed in the anal structures are present or not large irritable and tightly contracted anal muscles, which vehemently resist the introduction of the finger or any foreign body into the rectum, indicate local disease. If all the layers of the anal wall, the muco-cutaneous, connective tissues and the muscular layer are in an irritable and chronic state of inflammation, all the conditions for the production of many most annoying symptoms are present, either reflexly or as a focus of infection.

In some of these cases there will be an almost total destruction of the connective tissues surrounding the outlet of the bowel. The perianal skin will be redundant and discolored. (This excessive pigmentation is not a natural condition as frequently taught but indicates a lack of nutrition and a diseased condition of the underlying tissues.) The perineal floor is usually relaxed and the anal muscles sensitive. This type may produce reflex symptoms but more often is a focus of infection. In other cases the anal muscles will be tight, hypertrophied, spastic and extremely irritable; the pelvic floor is rigid and contracted, producing the so-called infundibuliform anus. The perinal and perirectal structures seem to be fibrosed and may contain deposits of fibrous tissue. This type of case usually produces reflex symptoms to the upper gastrointestinal tract and genito-urinary tract in addition to the severe systemic nervousness.

Time will not permit me to cite the many cases in my own experience of chronic pains in the legs, hips and back, urinary irritability, feeling of heaviness in prostate and uterus, existing in patients who had no discernable gross anorectal lesions, but who had the above described inflammatory states of the perianal and perirectal tissues. We based our deductions on the fact that when these diseased conditions about the terminal bowel were relieved the reflex manifestations promptly ceased.

The present tendency to include complete and competent investigation of the terminal bowel in our routine general diagnostic studies, including use of the X-Ray, instruments of inspection and bacterial studies has done much to advance our knowledge of the nature of disorders of these structures, their effect on general health and the production of reflex symptoms.

Complete and thorough investigation of the terminal bowel and the prompt recognition and interpretation of the various pathological states both organic and functional, as a routine procedure in every general diagnostic study, is the keynote of this humble effort.

The onward march of scientific medical progress is inevitable.

The solution of every obscure problem and the revelation of every new truth enables our increased vision to behold newer and more vast unexplored opportunities of unravelling the unknown disease forces that beset all mankind.

The time is not far distant when we will discover that the affections of the rectum and colon, the rough stones that we have heretofore trampled under foot, are literal acres of diamonds and the fabulous enrichment to medical knowledge that will accrue from our ultimate, complete understanding of their effects on remote disorders and general health may far exceed our most lavish predictions and optimistic expectations.

*HEAD INJURIES

By Daniel L. Maguire, M. D.,
Charleston, S. C.

In these days of rapid transit which is exemplified particularly in the automobile, there is an ever increasing number of head injuries, and in our hospitals the admissions show a relatively large number of cerebral trauma. With advent of good roads and high powered machines which are the products of our modern civilization, we are paying the penalty with serious and oftimes fatal accidents. The traumatic surgeon is coming to the front ranks and is called on almost as frequently as is the abdominal or gynecological surgeon. The operations performed by brain surgeons stand out conspicuous and brilliant in the light of other surgical procedures.

It seems to me therefore apropos that in the face of these ever increasing fractured skulls and intra-cranial insults, we should consider our methods of diagnosis and treatment. Just as in other surgical diseases, here also we have different methods of treatment. "Tot homines, tot sententiae." There are men who hold to the radical treatment and do a decompression operation for every linear fracture of the skull, while others are more conservative and not only do not operate on a linear fracture, but consider this as nature's methods of decompressing itself. Some surgeons depend on spinal or cisternal punctures for moderate intra-cranial hemorrhage, while others damn these procedures in the most violent terms.

There has been a tendency to promulgate a too voluminous and numerous classification of head injuries. Dowman for instance a few years ago divided injuries of the head into twelve classes. Dowman's classification concerned itself with the pathology present, and although most thorough and complete, it was unnecessary. It seems to me that a too elaborate division of head injuries simply confuses us. The most important classification and the one that concerns us as surgeons is the one as regards the treatment. From this standpoint all head injuries fall into three classes. First class: those that do not need operative interference. In this class should be placed all cases of concussion, linear fracture, and contusion of the skull. Second class: those serious and eventually fatal injuries which would not be benefited by surgery and hence where surgery is contra-indicated. In this second class are included all those extensively depressed fractures of the skull and massive intra-cranial hemorrhages, contusion of the brain substance, and marked medullary edema. These cases are doomed to death in spite of any treatment and live only a short time after the accident. Third class: are those injuries not included in the above two classes where operation will benefit the patient. In this third class are included depressed fractures of the vault, subdural hemorrhage, intra-cranial hemorrhage with moderate medullary edema.

When a patient is first presented to us with a head injury it requires judgment born of experience, to decide whether or not to interfere. In those borderline cases there is no symptom nor set of symptoms by which we can definitely and immediately say that the cranial cavity should be drained. A case in point was a child five years of age who was admitted into Roper Hospital with history of having been knocked down by an automobile truck. She was unconscious on her admission, pulse 76, Temp. 97'F, respiration shallow and slow. Spinal puncture showed blood in all three tubes and X-ray was negative for fracture. The child died one hour after her admission into the hospital evidently from an acute medullary compression from massive intra-cranial hemorrhage. We were about to operate on this child when she suddenly died.

Another case which I might describe in this connection and one which I would not operate today was a colored child six years of age who was admitted into Roper Hospital in an unconscious state. Pulse 56, respiration shallow, pupils immobile. Blood in spinal fluid and X-ray positive for fracture of parietal bone. Just before operation the pulse rose to 130 and the breathing became more shallow. The child died on the operating table. This was a patient who should have been placed in class two (2) and not operated because no operative procedure could have saved her.

To my mind the most important procedure

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in the treatment of head injuries is to observe the patient for a certain period of time after admission into the hospital. During this period the varying symptomatology can be watched as well as a general physical and neurological examination, a record of pulse and respiration every 20 minutes, frequent temperature observation, X-ray of skull, spinal puncture and eye-ground examination. After the observation period then the patient can be classified as above outlined and decision made as to whether an operation is indicated or not.

In an analysis of 100 cases of head injuires which have been treated by me, there were 65 cases of either fractured skull or intracranial hemorrhage and 35 cases of concussion. The cases of concussion were severe enough to remain in the ward from two to seven days before discharge. They all of course recovered without any treatment except rest in bed.

Maclaire in a recent article in the Annals of Surgery states that "concussion is a condition which we freely discuss, but concerning which we know very little pathologically. Patients do not die in this state and to produce a duplication of this condition experimentally with any degree of satisfaction is very difficult. We content ourselves by employing the loose but descriptive phrase "Shaking up the brain."

If we are willing to admit that concussion is a commotion of the brain, then the experimental findings of Sven Ingvor of Sweden may aid us in better understanding what very likely happens in these brains. The author centrifuged the heads of mice at the speed of 3000 revolutions a minute, and he was able to demonstrate some surprising results. He was able to show after centrifugation, 1st that the nucleolus of the ganglion cell was easily moved within that cell and was always thrown to the distal end of the nucleus. 2nd that there was an accumulation of the chromatophil substances at the distal end of the cell. 3rd that the canicular apparatus is squeezed out of its position. 4th that the whole set of the neurofibrils loosens as a unit from the cell membrane and when centrifugation has been sufficiently strong, occupies the center of the cell and encloses the nucleus.

In view of the findings of Ingvor we needs must feel that although concussion is not a demonstrable pathological entity in the human, it produces intracellular changes of some degree which is sufficient to cause usually a temporary alteration of some form in the life mechanism of the nerve cell.

"The treatment of concussion of the brain is entirely expectant with the patient in bed and probably an ice bag to head. They should be kept under observation but not necessarily in bed for about three or four weeks for during this time symptoms of headache, dizziness, weakness, insomnia, the various phobias and loss of self control may persist. Psychotherapy with mild sedatives and possibly a legal adjustment of the accident usually returns the individual to normal health."

As regards age of our patients, there were 32 children under fourteen years of age—28 children under ten years of age—six children under ten years of age died. The ages of the adult patients (68 in number) ranged from fourteen to fifty-six years of age. Fourteen adult cases died. Eight operated and six unoperated.

Sex and Race—There were in our series 74 males and 26 females—55 Negroes and 45 Whites. There is however little of significance here as regards sex or race as such but the most potent factor is the severity of the injury.

Agent producing injury—50 of the 100 cases of head injuries in our series were caused by automobile and out of the 20 deaths, 10 were due to the automobile. This of course shows us the importance of the automobile in the production of cranial trauma, as well as the seriousness of the injury so sustained.

State of consciousness—There has been a great deal written by the older surgeons as regards the consciousness of the patients with reference to the prognosis and treatment. In a great measure I believe this to be true today. A case which remains unconscious or lapses into a state of deeper coma even with a pulse of fair volume and frequency, offers a very grave prognosis. And the prognosis is extremely grave when coma deepens together with an ever increasing pulse rate. Of our patients (100) 47 were admitted unconscious or semiconscious. Of the 20 patients that died all were admitted in an unconscious condition.

Temperature—37 patients in our series had

a subnormal temperature on admission which does not carry any significance. It is true that patients that have been seriously and perhaps fatally injured will enter the hospital with a subnormal temperature, but this sign is of rather minor consequence as regards other symptoms. All of our patients who died had subnormal temperature. Willensky who is quoted by B. N. Carter in his article on fractures of the skull in the Annals of Surgery of February, 1926, has called attention to the prevalence of fever in skull fractures and attempted to explain it in one of three ways. 1st—Upset of the heat center. 2nd—Meningitis. 3rd—Tears in the Pia and the escape of cerebro spinal fluid through these which in the presence of a bacteremia gives temporary mild meningitis. Temperature in our cases however, has not been a prominent symptom and has been overshadowed by others more certain.

Pulse—Taken in conjunction with the consciousness or unconsciousness of the patient, I believe the pulse is most valuable in helping us to diagnose the condition of the patient, and hence indicating the need for interference. The pulse should be counted every 20 minutes and carefully noted. Frequently we will find that the pulse will vary greatly both in volume and rate from one minute to the next. A pulse which will count 40 one minute will run 90 the next minute. And this of course portends a serious outcome unless some form of operation is performed. Likewise a pulse under 50 or over 120 beats per minute means serious intracranial pressure. A patient with pulse 120 or over with deepening coma spells a fatality in spite of any interference. A slowly dropping pulse means a constantly increasing intracranial pressure, and this means interference if the patient is to be saved. The pulse in our series ranged from 48 to 160 in frequency. Both of these cases resulted fatally. On admission the pulse is significant only if it be very slow or very fast. A pulse rate under 50 or over 120 means we have a seriously injured patient. A pulse between these two extremes conveys little of information for us until we have watched it for a certain period of time. It is what happens to the pulse later that is of significance.

Blood pressure—We do not feel that the change in the blood pressure readings are consistent enough to justify us in stating that they offer us any information in regards to the condition of the patient. Theoretically with the increase of intra-cranial pressure, there should be an increase of the blood pressure. Practically however, in about 25% of our cases in which the blood pressure was taken, we did not find this to be the case.

Respiration-Respiratory rate under twelve per minute are seriously ill patients and patients showing the Cheyne Stokes respiration almost all die. Operation is contra-indicated in patients who show the Cheyne Stokes respiration as well as a peculiar sighing respiration which can be easily detected if we look for it.

Bleeding—Number of patients bleeding from the nose or ear were 18, and nine of these cases died. Bleeding from the ear or nose means extensive and serious damage to the base of the skull and renders the prognosis much graver in these cases. Emphasis should be laid down here on the care of the wounds of the ear and nose because of the possibility of the later development of meningitis. Strict asepsis in the cleansing of a bleeding ear or nose should be meticulously maintained or better still an Otologist should be in consultation with us on the case.

Fundus Examination—The general opinion as regards the eye-ground I believe, is uncertain and some men are skeptical of its value. They believe that papilledema will show itself too late to be of any information. In the early stages (or during what I have called the observation period) it is doubtful if a choked disk will become manifest. In our series of cases, examination of fundus was done in 36 cases. Sixteen negative and 20 postive. Not all of these examinations however, were performed in the early stages, and not all were hundred per cent correct. We found for instance that with a negative report from the Ophthalmologist, the patient would at time of operation, show an intra-cranial hemorrhage, and vice-versa. Of course we would not be guided by the statement of the Ophthalmologist alone, but in our judgment the fundus examination is only another aid in helping us to correlate our findings in regard to making a proper diagnosis and instituting proper treatment.

Spinal Puncture—In our series there were 66 spinal punctures performed and 46 of these were done during the observation period. Of these 46 punctures, 31 contained blood and escaped under pressure. Thirty-five were clear. Of the 31 cases containing blood, 10 died. By some surgeons spinal punctures are used not only diagnostically, but therapeutically. This procedure is highly praised by some and condemned by others. The objections urged against its use are: 1st Liability of Medulla dropping into Foramen Magnum and causing sudden death. 2nd Danger of infection. 3rd Unreliable. Sachs for instance vigorously opposes spinal puncture and states that men deliberately conceal their fatalities. However, in our series we have used spinal punctures as a routine and have had no untoward effect from its employment.

X-ray Examination—There were 58 X-ray examinations done. Thirty positive for fracture of the vault, 19 positive for both vault and basal fractures, and 28 negative. This coincides with the general opinion as regards the proportions of basal fractures. That is that two thirds of fractures of the vault also communicate with the base of the skull. The fractures of the vault offers the best prognosis, the depressed fracture being best treated by an immediate operation and elevation of the fragments, the simple linear fractures being allowed to remain unoperated. Except for depressed fractures of the vault, the presence of a fracture should not be a signal for decompression operation. The fracture per se means nothing and needs no treatment provided there has been no intracranial insults. Heretofore too much emphasis has been laid on the condition of fractured skull and unfortunately juries have awarded huge amounts of money on the mere X-ray demonstration of a fracture of the skull when as a matter of fact the real issue has been overlooked namely—sequelae and complications.

Paralysis and Twitchings—A definite continued paralysis or twitching of an extremity is an indication of an immediate operation, but does not occur as frequently as we would suspect. In our series, 9 cases presented this symptom and 4 cases died.

Dehydrating solutions—The use of Sodium Chloride and Magnesium Sulphate solutions are being used quite generally today as dehydrating agents in treatment of moderate cerebral edema and severe concussion of the brain. Dowman is most enthusiastic in the use of Magnesium Sulphate and uses at times Sodium Chloride in an intravenous solution of 15% to 30%. Magnesium Sulphate is perhaps the best of all dehydrating agents because it is absolutely free from all danger. It is given in 50% solution (6 oz.) as rectal enema every 6 hours. In our series of cases we have employed Magnesium Sulphate solution quite often and there is no doubt that it exerts a beneficial influence on the patient in the reduction of a moderate cerebral edema.

Operations—In our series of 100 patients there were 40 operations and on 5 patients we performed a double decompression, 4 of whom recovered. The second decompression operation being performed in these cases from 24 to 72 hours after first operation. Of the 40 operations 14 died. An operative mortality of 33%. However, in the beginning of our series we operated patients whom we would not operate today. At least 3 of our cases upon whom we performed a decompression operation would have died in spite of any operative procedure. "Ever since operations for fractured skulls have been devised and they are surely ancient operations (trephine) the profession has been divided as regards the value. There seems to have been three groups. The first group advocating operation in every case of fractured skull. The second group decrying operation, and the third group operating in selected cases.

"Each of these groups has been the field. At the present time there is certainly a tendency towards conservatism. Operations being performed, I believe in the minority of cases, after the patient has been under careful observation for a certain period of time, and after other measures for the relief of intracranial pressure (lumbar puncture, dehydrating solutions, etc.,)have failed."—MacLaire.

Mortality—Of the total number of head injuries treated (100) 20 patients died, which represents a total mortality of 20%. Of the 20 patients who died, 6 of this number died within a few hours of admission into the hospital and without operation. Six patients then

were admitted moribund. If we should deduct these six cases, there would be a total number of 14 deaths out of 100 cases. A mortality of 14%.

Summary in Brief—The treatment of head injuries resolves itself into 1st—No treatment for concussion except rest in bed and ice bag to head. 2nd—Cases of depressed fracture, paralysis or localized convulsions and active subdural hemorrhage (showing itself by unconsciousness at time of injury, then full consciousness and lapsing into unconsciousness again) should have an immediate operation performed. 3rd—Institution of a certain period of observation in doubtful or borderline cases, during which the pulse, respiration, temperature, spinal puncture, eyeground examination and X-ray can be done and the changing train of symptoms and signs can be carefully studied and correlated. 4th—The two most important symptoms to my mind to watch are the pulse and condition of consciousness and unconsciousness. If the patient remains unconsciousness or semi-conscious with a slow pulse, or a constantly slowing pulse, the indication for decompression is clear. If on the other hand, returning consciousness is noted, even with a slow pulse, watchful observation may be continued.

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DISCUSSION

Dr. Olin B. Chamberlain, Charleston: In the first place, I want to commend Dr. Maguire on the preparation of such a paper. I think we all agree, in listening to medical articles, that it is this type of paper which does the most good. When a surgeon has the opportunity to observe carefully a large series of cases he has a chance to pass through the period of uncertainty as to his own therapeutic measures; and then to stabilize himself and to come to certain definite conclusions about himself and his patients. It is therefore of considerable value to the rest of us to have those conclusions presented clearly and concisely.

Dr. Maguire's interest has been centered largely upon the question of acute cases as they present themselves in the ward. You notice that he sounds always a note of conservatism, watching the patient, finding out which symptoms are of most importance and keeping in touch with those. One point which he brought out I think can not be accentuated too much, and that is the comparative unimportance of the presence or absence of linear fractures. The knowledge of the presence of linear fractures is of comparatively little value to us. It is not the fracture we are going to operate for; nature can heal it much better than the surgeon; but the question of first importance is whether there is compression of the intracranial contents. Very often the presence of the fracture is a healing factor, relieving intracranial pressure.

Very often we see a case rushed to the hospital, the x-ray man comes on an emergency call, the patient is placed under the x-ray, and after a while the x-ray man comes out of his dark room and says, "No fracture," and everyone breathes a sigh of relief. But these linear fractures are really of no importance.

Another point touched on by Dr. Maguire is the amount of compression and the sequelae in these less grossly injured cases. Concussion as a sequela has passed through various aspects of medical thought. A few years ago concussion was placed as a non-pathological entity—that since we could not demonstrate gross pathological changes therefore there had been no brain injury. There has been lately, I am sure, a quite different point of view about it. There can be brain injury and is, very often, as we have seen demonstrated by ordinary observation, and Dr. Maguire has referred to the experiment of centrifugalizing mouse brains ,which showed changes in the tissues. The concept, I think, today is that in a great many cases of concussion (even, I say, where there can not be demonstrated pathological changes) we are dealing with a subpathological encephalitis, if I may use such a term. That is a point of more than academic interest; it is a point of considerable importance in determining the life history of the patient afterwards. When a man has received a head injury from which he has only transient unconsciousness or transient drowsiness and comes to his doctor or lawyer a few weeks later complaining of headache, dizziness, and all that chain of symptoms, are we going to call it a compensation neurosis case or are we going to call it a case of traumatic encephalitis? So I think our concept of brain injury is in a state of change now, and I think every paper of the type present by Dr. Maguire is valuable.

Dr. T. E. Bowers, Charleston: You have, of course, realized that Dr. Maguire covered his subject very completely. There are some facts which we have confronting us and which we can not get around. The first of all is that any injury to the head must be considered serious, whether it is a laceration of the scalp or a depressed fracture of the skull. We are not concerned, as Dr. Chamberlain, has said, with the fracture itself but with compression and injury of the brain. So we must regard those cases which come to us as being serious; and even if they have been unconscious and have regained consciousness and say they are feeling all right, yet they must go through a period of observation before we can say they are all right. The whole thing, as Dr. Maguire says, is diagnosis; and the diagnosis in these cases rests upon the individual experience which the surgeon himself has had in the interpretation of the symptoms present. We must understand what is going on, and there are some things going on which are of prime importance.

First of all, there is hemorrhage; hemorrhage is going on. Edema of the brain is going on. If those things are not taken care of, other things will happen. We must give an outlet somehow. There are only two ways of giving this outlet, one by repeated spinal punctures and the other by a decompression operation. The pressure on the medulla is relieved as the fluid is drained off by repeated spinal puncture. We use it routinely here. Frequently these patients do not improve, do not regain consciousness; and it is then we resort to the decompression operation and the use of these dehydrating substances, chief of which is magnesium sulphate.

I think with what Dr. Maguire and Dr. Chamberlain have told you there is little else for me to say, and I can but commend them on their handling of the subject.

Dr. J. H. Taylor, Columbia: Through the last twenty years I have come to some very definite ideas about fractured skull. In the first place, any person with a skull injury who is unconscious is seriously injured, in all probability; that is, there may be serious consequences, and he must be looked after extremely carefully. I feel the most important thing from the standpoint of diagnosis is to watch the eye-grounds for swelling of the optic nerve. I think Dr. Maguire rather made light of that, but in my experience I lay emphasis on that. It does not appear for about forty-eight hours, but until that patient is operated on or is entirely out of danger once a day eye-grounds are examined by a specialist.

Next is the question of the blood pressure, which is intimately associated with that eye-ground situation. Whenever that intracranial pressure approaches the same as the general pressure, your patient is hovering on the brink. Therefore you must watch carefully for slowing of the pulse, for slowing of the pulse means that the heart is thumping harder and harder and that the pressure is rising. That is an indication for a decompression. Those two pressures are approaching each other, and when they get equal, then goodnight. That is the experience of twenty odd years.

What is this optic sign? This is an edema. When you have an injury to the brain, not necessarily that the brain is torn, but when you shake things up in there you have an outpouring of serum from the lymphatics. You have an intracranial pressure, and the edema swells that nerve, begins to press on it; it gets engorged, and you have papillo-edema.

The next thing to watch is the x-ray picture. That simply gives you information; it does not tell you to operate. You do not have to operate on all fractures of the skull. If you have a depressed fracture, that will cause increased intracranial pressure, and that increased intracranial pressure will be shown up in the optic nerve.

The next thing to look for is fractures of the base, which do not always show up in x-ray pictures, I believe. There is a discharge of fluid from the ear and from the nose, With middle fossa fracture there is paralysis of the facial nerve. If after five or six hours, when you have had no blow over the eye, you begin to show a little discoloration above the eye, you have had a fracture there in the middle fossa. All of these things you want to watch most carefully.

Another thing; watch the eye-grounds. You cannot drain the skull by one decompression unless you go back under the base, which is a very difficult operation. A rather simple operation is Cushing's temporal operation, and that will relieve the pressure which is doing the damage. If you have a depressed fracture, raise that; you have to lift that up. If there are fragments of bone, take those fragments out.

As to this spinal puncture business, if you have a brain injury and take a small amount of fluid out, that does not tell you to operate; you have to watch the eye-grounds. If you have increased intracranical pressure you do not want to be fooling with that spinal fluid; you want to go in at the side here and do something right away—that is my opinion.

Dr. Maguire, closing the discussion: I have nothing more to say, except to thank the gentlemen who took part in the discussion.

It seems to me that although Dr. Taylor has talked very vehemently, I think we have the same opinion about these injuries. My idea of injured heads is that the case ought not to be immediately operated. If you ask me how long operation should be postponed, I could not tell

you; it may be a matter of an hour, perhaps, or six or eight hours, or twenty-four or forty-eight hours. During that period of time I think the changing symptoms ought to be watched—the eye-grounds, with the appearance of papillo-edema; the blood pressure; and, more particularly, the slowing pulse and consciousness or unconsciousness of that patient. I believe if the patient is becoming more drowsy, with constantly slowing pulse, I think that is an indication that we ought to do a decompression operation.

Another thing I did not mention in my paper which I am sure we do not do often enough is a double decompression. Of the five cases on whom I did a double decompression, four lived. I think if I had not done a second decompression those four would certainly have died.

EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M. D., F. A. C. S., CHARLESTON, S. C.

OPTIC NERVE ATROPHY FROM REMOTE CAUSES, DR. H. V. WURDEMANN

By J. F. Townsend, M.D., F.A.C.S., Charleston, S. C.

In cases of blindness due to optic nerve lesion we perhaps too often expect to see opthalmoscopically the symptoms of optic atrophy but we should realize that the optic nerve is not of continuous fibres but of three sets of fibres, as follows:

1 The retinal elements, the optic disk, the optic nerve to the chiasm.

2. The chiasm and optic nerve, the optic nerve tract and probably the thalamus.

3. From the optic radiations to the cuneus and cortical visual centers.

Therefore, an entire loss of vision might occur from such disease or injury located centrally, without optic nerve atrophy being apparent at the optic disk.

Optic Nerve Atrophy is a term usually applied to the condition of the disk when the optic nerve is degenerated. There are three types—(1) Distal. (2) Medial. (3) Central.

These have been described as "ascending" when arising from conditions in the eye or orbit or "descending" when arising from implication of the optic nerve tracts and centers. They are also "primary," following a neuritis apparent at the disk and "secondary," in which optic atrophy occurs without previous evidence of local disease, but associated with general disease, usually of the central nervous system or with no discoverable cause. This terminology is different from that often used but he explains what he means.

We are getting closer at our cause now for 15 years ago according to James Moores Ball, Vol. 1, Amer. Cyclopaedia of Opthalmology, states that "in probably 60% of the cases there is not a describable cause." "No cause in 117 cases was found by Derby in 71." I think that one can do better now and raise the percentage to at least 90% by approved disgnostic causes.

The pathologic changes depend upon the etiologic factor.

In primary atrophy there is a withering of the retinal ganglion cells.

In the post-neuritic type there is, 1st. an increase of connective tissue in the nerve head and in the nerve stalk. 2nd. the nerve canals disappear with loss of the nervous elements. 3rd. the coats of the vessels are thickened (a) the blood stream becomes smaller and (b) the vessels do not extend to the peripheral retina. 4th. the smaller vessels cannot be seen upon the nerve, which may, 5th. not become cupped, and 6th. the lamina cribrosa is not visible. The optic nerve becomes a cord of whitened elastic tissue.

In optic nerve atrophy following a real neuritis and in choked disk, the nerve takes on a grayish color with irregular and blurred edge.

In tabes and multiple sclerosis the (a) nerve fibers lose the medullary coverings and (b) are changed into fine fibrillae, and (c) fatty granular cells are found between them. The same may be said of those cases due to toxemias, as alcohol, tobacco, quinine, arsenic and those

from some general disease as attended by toxemia.

The retro-bulbar causes of neuritis results in a degree of atrophy, depending upon the cause and the extent of the process. The neurones are immediately affected by poisons, as by wood alcohol and its congeners, which poison the nerve elements, causing a low degree of inflamation, only seen in the nerve head by slight hyperemia, followed within a few days by blanching of the disk and pronounced atrophy with blindness.

The effects of such poisons, as arsenic, quinine, tobacco, is usually not so massive but is continuous and cumulative so that the blindness is more gradual. These first affect the retinal elements and then cause changes in the nerve tracts.

Chronic corporeal infections, as pus about the teeth, tonsils, sinuses, gall bladder and appendix, and intestinal toxemias are even more slow in action and are subject to interludes with replacement of some of the nerve elements, with fungacious improvements of vision. (In about 1907 I saw a visual disturbance due to the teeth that became better and worse and finally cleared on removal of the teeth. It recurred about 1924 from teeth and again cleared on their removal. Conforming Rosenow's theory of selective action of bacteria).

Traumatism of the optic nerve within the orbit by foreign bodies, wounds, fractures of the optic foramen, pressure upon the nerve within the orbit from hemorrhages about or in the sheath, all come under the head of direct injuries and do not show on the nerve head as an inflammatory process but do whiten the disk and cut off the circulation of the main vessels.

(We see cases of this frequently in clinics or hospital service, blindness coming on suddenly after some head injury and atrophy appearing later.)

Congenital anamolies are due to some systemic cause as (a) syphilis, (b) tuberculosis, (c) injuries at birth, the lesion being located behind the globe, being at first a retrobulbar neuritis. (d) edemat of the optic disk in cases of hydrocephalus in young children, from the pressure on the nerve and tracts from a distended third ventricle. (There is a case in pediatrics ward at Roper Hospital now, blind from hydrocephalus, but it is there for treatment of some other trouble.)

Blindness may follow an alcohol injection in attempts to inject the sphenopalatine ganglion, where direct injection has been made in the optic nerve (Am. Jr. Op., 1929) and parrafine injection in the external nose and the turbinal bodies and carried into the opthalmic veins, has been reported with the resultant occlusion and atrophy of the nerve. Fisher reports complete loss of vision five days after injection of olive oil and lanolin for removal of wrinkles in the face. (All showing the danger of the area drained by the opthalmic vein.)

When the injury is posterior to the thalmaus, blindness results but the effects are not usually shown on the disk.

In toxemias the mere delicate foveal fibers are usually first affected, with central scotoma and blanching of these fibers on the disk. However, the disk may appear very white with marked exhibit of the lamina cribrosa but the circulation of the blood in the central vessels remain, so that vision may be relatively good.

Degenerations beginning in the retinal elements, as from chroni-retinitis, choroiditis pigmentosa, ultimate slowly in atrophy of the nerve.

The etiology of optic nerve atrophy cannot be substantiated, neither should treatment be instituted, without a complete physical examination, which, in addition to the eyes and vision, should include a general physical examination.

The foregoing is mainly an anatomo-physiologic and pathologic discussion. It is explanatory of the reason why rather than the diagnosis and therapeusis of optic nerve atrophy.

The visual fields vary and are in no sense diagnostic. The part of the retina most sensitive to disease is the cones and the reception of color in confined to them.

Treatment—administration of glandular produces, particularly small doses of thyroid and anterior pituitary gland, arsenic, mercury, iodides and strychinine. Also suction massage and high frequency electricity.

SOCIETY REPORTS

PROCEEDINGS OF THE SPECIAL MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL, WEDNESDAY, AUGUST 14, 1929, AT 8:30 O'CLOCK.

The meeting was called to order by the President, Dr. Henry J. Jackson.

Present:

Doctors: Banov; Beach; Beckman; Boette; Burn; Cannon; Cathcart; Deas; de Saussure; Finger; Jackson; McCrady; McInnes; Maguire; Martin; Mood; Palmer; Pearlstine; Plowden; Prentiss; F. R. Price; Prioleau; Ravenel; Rhame; R. B. Rhett; W. M. Rhett; Richard; Scott; W. A. Smith.

Guests: Dr. J. F. McClendon, of the University of Minnesota; Dr. David Marine, of New York; Dr. Mazyck Ravenel of the University of Missouri; Dr. William Weston, Chairman of the Research Commission of Columbia, S. C.; Dr. Lanning, of the U. S. Navy; Mr. Culp; Dr. Peoples, and Mrs. McClendon.

The President stated that the object of the Special Meeting was for the purpose of giving the members of the Society an opportunity to meet and hear some of the distinguished physicians who were visiting the South Carolina Resources Commission's laboratories at the Medical College, in charge of Dr. Roe E. Remington. The President requested Dr. Remington to introduce the guests of the evening. Dr. Remington stated that he was holding a conference of those interested in nutrition and public health, and had brought these gentlemen to Charleston to discuss the work being done in his laboratory. He stated that the laboratory was making research into the mineral elements of the foods in South Carolina, and were making studies to determine the value of these in the food products of this State, in human nutrition. He then introduced Dr. McClendon, of the University of Minnesota, Dr. David Marine, of New York, Dr. Mazyck Ravenel, of the University of Missouri, and Dr. William Weston, Chairman of the Research Commission of South Carolina.

The President then called upon each of these gentlemen, who made short addresses in which they praised the work being done in the laboratory here, and expressed the hope that these excellent beginnings would result in the establishment of the work on a permanent basis. They emphasized the far-reaching possibilities of the contribution to the science of nutrition.

Dr. Mazyck Ravenel expressed great pleasure in returning to this Society, of which he was a former member and at one time Secretary, referring to the fact that it was the chief duty of the Secretary in his day to keep the wine cask full.

After the completion of these short addresses, the Society adjourned and an informal reception was held.

W. Atmar Smith, Secretary.

PROCEEDINGS OF THE SPECIAL MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL, WEDNESDAY, SEPTEMBER 25, 1929, AT 8:30 O'CLOCK.

The meeting was called to order by the Vice President, Dr. J. Walter Burn.

Present:

Doctors: B. R. Baker; Ball; Banov; Beach; Beckman; Bowen; Buist; Burn; Cain; Cannon; Cathcart; Chamberlain; Deas; de Saussure; W. H. Frampton; Heidt; McCrady; McInnes; Maguire; Mitchell; Mood; Moore; O'Driscoll; Palmer; E. F. Parker; Prentiss; F. R. Price; Prioleau; Rhame; R. B. Rhett; W. M. Rhett; Richards; J. E. Smith; W. A. Smith; Waring; Wild; I. R. Wilson; Whaley.

Guests: Mr. F. O. Bates, of the Roper Hospital, and Dr. Young, of Columbia.

The Vice President requested the Secretary to state the object of the meeting.

The Secretary stated that the meeting had been called at the request of five members of the Society for the purpose of hearing Mr. L. L. Jamison, of the Merchants Mercantile Agency, of Washington, D. C., on the subject a credit guide. The Secretary stated that this Agency was working under the auspices of the Chamber of Commerce. The Vice President then called upon Mr. Jamison to explain the methods by which this Agency operated.

Mr. Jamison outlined at length the purpose of the Agency; he pointed out that the credit rating of nearly every individual in this city and the surrounding community could be obtained by the use of the guide which is published by this Agency. He said that about twenty-five members of this Society had already joined, and he believed that if the majority of the members would align themselves with the organization, it would be more profitable to the profession as a whole. He went into details explaining the cost to each individual, and answered

many questions put to him by members of the Society.

Dr. E. F. Parker moved that the Medical Society endorse the Credit Rating System as proposed by the Merchants Mercantile Agency and that as many members of the Society who desired to do so, join it. The motion was seconded. It was then discussed by Drs. Maguire, I. R. Wilson, Buist, Cathcart, F. R. Price, Rhame, and others. At the conclusion of the discussion, the Vice President put the motion and it was unanimously carried.

The Secretary then read a letter from Mr. Gilmore Smith, President of the Charleston Board of Trade, in which he brought out the value of the Credit Bureau operated by the Board of Trade. He said in the letter that the only charge for credit ratings and information, consisted in the annual membership fee of the Board of Trade. On motion, this letter was received as information.

There being no further business, the meeting adjourned.

W. Atmar Smith, Secretary.

REGULAR MONTHLY MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY HELD AT LIBRARY HALL, MONDAY, OCTOBER 7, 1929.

The meeting was called to order by the President, Dr. J. G. Murray, at 8:20 P. M., with the following members present:

Drs. Bishop, Brown, Smith, Wilson, Bruce, Grimball, Sanders, Wyatt, Hearin, Bates, C. B. Earle, Pitman, Metz, Clegg, Pollitzer, Garrett, Davis, Wilkinson, Johnston, Guess, Evatt, Carpenter, Goldsmith, Brunson, Benson, Blakey, White, Watson, Murray, Richardson, Kitchen, Mauldin, J. M. Fewell, W. S. Fewell, and Barksdale.

The minutes of the last meeting were read and approved.

Reports of clinical cases were next called for. Dr. Carpenter reported a case of 7th and 9th cranial nerve paralysis due to syphilis. The paralysis was thought to be due to a basal meningitis.

Dr. Sanders reported a case of a woman in her early forties who had complained of a chronic cough, and loss of weight. She had previously received a diagnosis of pulmonary tuberculosis, and had spent three months in a hospital, after which she was unimproved. Later examination revealed an infected left antrum, ethmoid and frontals. She was improved following the opening of these sinuses.

Dr. Goldsmith reported some serious cases of serum reactions following administrations of anti-toxins; these reactions were secondary.

Miss Emily Passmore, the Red Cross Nurse requested assistance from the Society in her work.

Dr. L. O. Mauldin was then called upon, and he addressed the Society on "Therapy of Some of the Eye Medicines." He stated that many drugs were formerly used, but now the number has been reduced to about a half dozen. It was also stated that Therapeutics was one of the major subjects in the leading medical colleges.

If an eye condition is due to a systemic infection, the cause must be sought and rigidly treated.

In mentioning the mydriatics, atropin and homatropin were considered to be the most important. Dr. Mauldin stated that few people had an idiosyncrasy to atropin, but where this was encountered, morphin was the drug of choice. Atropin is very popular as an antispasmodic. Mydriasis is due to a paralysis of the third nerve ending in the eye, and perhaps to stimulation of the sympathetic. The strengths of solutions used in the eye vary from ½-2 per cent. Normal pupils may be dilated for two weeks, whereas inflamed eyes require more frequent instillations of atropin. Atropin is actually absorbed into the eye, as it has been found in the vitreous humor frequently after use. Atropin is used especially in young people to accustom them to glasses. It is contraindicated in glaucomae on account of its tendency to block up the canal of Schlemm. Eserine is the antagonist of atropin.

Homatropin has its maximum effect in 40 minutes; the pupil returns to normal in 24 hours. It is the mydriatic of choice. Pilocarpin shortens the period of mydriasis. Cocaine and adrenalin synergize atropin and homatropin.

Among the important mitics were mentioned pilocarpin and physostigmin. These are used a great deal in treating glaucoma.

The important local anaesthetics are cocaine, although it may be very toxic, butesin, anaesthesin, novocaine. There is no definite antidote for cocaine poisoning. A cocaine death is very quick. Epinerphrin is very valuable in preventing the absorption of cocaine, provided there is no idiosyncrasy to it. No anaesthetic is as deep as cocaine.

Beta-eucaine does not dilate the pupil, or irritate; holocaine is a valuable local anaesthetic.

Among the useful antiseptics were mentioned, zinc sulphate, silver nitrate for gonoccoccal infections, numoquin for pneumococcal infections, mercurio chloride, etc. These preparations are all less painful to the patient if used with physiological salt solution. Ten per cent protargol and twenty per cent argy rol are also valuable. Discussed by Dr. Sanders.

The matter of physicians' City License fees was then taken up. Dr. Pollitzer moved that

the report of the Committee be received as information, seconded by Dr. J. M. Fewell and carried.

The application of Dr. J. G. Pitman was then read. It was moved, seconded and carried that Dr. Pitman be elected to membership in the Society.

Dr. Bruce again brought up the question of physicians' License Fees, as he was detained from the meeting. Discussed by Dr. Hearin, Mauldin and Davis. It was moved that the License Fee be $20.00 for the first $2,000 gross income and $1.00 for each additional $1,000 gross income; seconded and carried. It was also moved that the Committee go before the Finance Committee of City Council; seconded and carried.

There being no further business, the meeting adjourned.

Irving S. Barksdale, M. D.,
Secretary.

YORK COUNTY MEDICAL ASSOCIATION MEETING

This being the regular time of meeting and a special annual social that was begun last year all looked forward with pleasure to the meeting arranged for in the Blue Parrott Tea Room, a social center for the York Lion Club, Rock Hill, S. C., on October 3, 1929.

The meeting was called to order by the President Dr. Dunning. All were comfortably seated around the well filled tables. The beautifully decorated and well arranged combined rooms added to the pleasantries of the occasion.

A survey of the gathering showed eight physicians who accompanied their wives. There were present seven without a helpmate or "hubbie." We were also glad to have the following members of the profession with us, Dr. Leora Perry and Dr. Holmes as visitors. There too, last but by no means least the speaker of the evening, Dr. E. E. Horger, of the Staff of the State Hospital.

A musical selection followed by Mrs. Caldwell who was accompanied at the piano by Mrs. Kennedy. After several musical selections and the fine supper prepared by the Matrons of the Lions Club we were introduced to the real treat of the evening, Dr. E. E. Horger, by his class mate, Dr. W. C. Whitesides.

Dr. Horger discussed the subject, "The Most Prevalent Mental Disorders and Some of the Methods for Their Prevention." Dr. Horger showed the need for legislative support for the maintenance of the State Hospital and showed us that our State rates were low when compared to other States for the number of its inmates per hundred thousands. He showed that pellagra had her many inmates in the 1928 applicants. Alcoholism, and lues also making up their members not a few. These he said could be prevented if handled properly. Then he showed us by concise case histories the different forms of mental disorders. Their causes and treatments. This was done in such a clear manner that as one attending who was not a medico said, "I could just picture each case that Dr. Horger illustrated." All present enjoyed the program very much.

After the end of the program there was a call for speeches. When no one seemed to respond the Hon. J. H. Saye called upon Dr. T. N. Dulin to give us an account of his trip to Canada this summer and to tell us what he brought back, but we were not favored with the speech.

Dr. Des Portes reminded us of the approaching Fifth District Medical meeting to be held in Rock Hill, October 31, 1929, and asked that all try to come and make it a success.

W. K. McGill, M. D.,
Secretary-Treasurer.

"RESOLUTIONS"

Newberry, S. C., October 4, 1929.

WHEREAS; It has pleased Almighty God to remove from our midst our Friend and Brother in the Profession, a member of the Newberry County Medical Society, Walter Gustav Houseal, M. D., who has served humanity with untiring zeal for many years, and

WHEREAS; His place in this community will be hard to fill, therefore,

BE IT RESOLVED; That the members of this Society feel keenly their loss of a Friend and Brother practitioner and moan his passing; and

BE IT FURTHER RESOLVED; That a page in the book of minutes of this Society be inscribed to his memory, and that a copy of these resolutions be sent to his bereaved family.

Committee:
H. Grady Callison, M.D.,
E. D. Hentz, M.D.,
A. T. Neely, M.D.

BOOK REVIEWS

THE SURGICAL CLINICS OF NORTH AMERICA.—(Issued serially, one number every other month.) Volume 9, number 3. (New York Number—June, 1929) 299 pages with 125 illustrations. Per Clinic year (February, 1929 to December, 1929.) Paper $12.00; Cloth, $16.00. Philadelphia and London.

THE MEDICAL CLINICS OF NORTH AMERICA.—(Issued serially, one number every other month.) Volume 13, No. 1. (Boston Number —July, 1929) Octavo of 280 pages with 36 illustrations. Per Clinic year, July, 1929 to May, 1930. Paper, $12.00; Cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company, March, 1929.

DISEASES OF THE BLOOD—By Paul W. Clough, M. D. One of the most difficult chapters in medicine is that which has to do with what are called the diseases of the blood. The nomencilature is confusing, the etiology generally obscure and the treatment all too frequently hopeless. The literature of the subject is peculiarly inaccessible. One find articles in the larger systems and text books and numerous shorter papers are distributed throughout the periodical literature. Longer and more adequate treatises can be found in French or German but in recent times no American author has collected the information into a single volume.

Dr. Clough has performed this service for his profession. Following a brief, but ample discussion of the various types of blood cells and their origin he discusses the anemias, the leukemias and their related conditions. This is followed by an excellent chapter on blood transfusion and a section on methods of examination that contains all it is necesary for the practitioner to know.

It has been the custom in the past for physicians to divide blood diseases into two groups, anemias that should be treated with iron and conditions that are obscure and require the services of a consultant. The enormous effectiveness of liver in the treatment of pernicious anemia has popularized these conditions and it is now necessary for the practitioner to be able to make his own diagnosis if he is to maintain his standing among his colleagues.

In this book he will find all that he needs to know to recognize and treat those conditions included within this difficult group, at least when they are recognizable by ordinary means. It should prove a valuable companion to the physician in his practice: Harper and Brothers, 40 East Thirty-third Street, New York, N. Y.

MODERN PRACTICE OF PEDIATRICS—By Williams Palmer Lucas, M.D., LL.D. Professor of Pediatrics, University of Cal. Cloth, Price, 8.50. Pp. 962, with numerous illustrations and charts. New York, The MacMillan Company, 1927.

In general, medical books are more or less instructive. Occasionally one is interesting. It is however very unusual to find a work that is both. Dr. Lucas has given us a volume that is not only valuable, but entertaining. While of course it is not enclyclopedic, yet it covers all that a man in practice need know about infants and children. One should not look it over unless he is willing to spend considerable time, for it entices the reader from one subject to another so easily that the clock is unnoticed. After each chapter there is an excellent list of references for further reading. At the end of the book over 60 pages are devoted to therapeutic and diagnostic procedures. This is very practical. There is found, dose tables, laboratory procedures, clothing and diet, all concisely and clearly discussed or outlined.

There is nothing super-scientific about this book; but on the other hand the very latest discoveries and writing in regard to biologic or chemical essentials are noted. The press-work is excellent.

One can practice pediatrics without it but the pediatrician and family doctor will find it very helpful as a guide or reference work. —R. M. Pollitzer, M.D.

LOCAL IMMUNIZATION.—By Professor A. Besredka of the Pasteur Institute, Paris. Translated by Harry Plotz, M.D., of the Pasteur Institute. Cloth, price $3.50. Pp. 181. Baltimore, Md. The Williams & Wilkins Company, 1927.

This interesting little volume by a bacteriologist of note presents an entirely new concept of immunity. While the reports of the laboratory experiments are scientific and to a slight degree technical, yet the volume is so clearly written and conclusions so important to the medical man, that it is well worth reading. This book serves as an example of the close correllation of experimental medicine and everday practice. The chapters on Dysen-

tery and Typhoid Fever are quite revolutionary. However the authors conclusions have been already put to the test in several thousand cases. The results coincided with the laboratory findings. Unless it can be proved that immunization by this modern method is not entirely satisfactory, in a short time, it will be in use everywhere.—R. M. Pollitzer, M.D.

TULAREMIA, HISTORY, PATHOLOGY, DIAGNOSIS AND TREATMENT—By Walter M. Simpson,M.S., M.D., F.A.C.P. Director of the Diagnostic Laboratories, Miami Valley Hospital, Dayton, Ohio; Formerly Senior Instructor in Pathology, University of Michigan. Foreword by Edward Francis, Surgeon, United States Public Health Service. With 53 Text Illustrations and 2 Colored Plates. Paul B. Hoeber, Inc., New York MCMXXIX.

MINOR SURGERY.—By Frederick B. Christopher,, Associate in Surgery at Northwestern University Medical School, Chicago. With a Foreword by Allen B. Kanavel, M.D., Professor of Surgery, Northwestern University Medical School. Octavo of 694 pages with 465 illustrations. Philadelphia and London: W. B. Saunders Company, 1929. Price $8.-00 net.

A STUDY OF MASTURBATION and the PSYCHOSEXUAL LIFE.—By John F. W. Meagher, M.D., F.A.C.P. Neurologist to St. Mary's Hospital, Brooklyn; Neurologist to the Mary Immaculate Hospital, Jamaica; Consulting Psychiatrist to The Kings Park State Hospital; Consulting Neurologist to The Rockaway Beach Hospital; Ex-President of the Brooklyn Neurological Society; Member of the American Psychiatric Association, New York Neurological Society, etc. Second Edition. New York, William Wood and Company MDCCCCXXIX.

MEDICAL STATE BOARD QUESTIONS AND ANSWERS.—By R. Max Goepp, M.D., Professor of Clinical Medicine in the Graduate School of Medicine, University of Pennsylvania. Sixth Edition, Thoroughly Revised. Octavo volume of 754 pages. Philadelphia and London: W. B. Saunders Company, 1929. Cloth, $6.00 net.

THE MEDICAL CLINICS OF NORTH AMERICA.—(Issued serially, one number every other month.) Volume 13, No. 2. (Chicago Number, September, 1929) Octavo of 232 pages with 61 illustrations. Per Clinic year, July, 1929 to May, 1930. Paper, $12.00; Cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company.

DISEASE OF THE CHEST AND THE PRINCIPLES OF PHYSICAL DIAGNOSIS.—By George W. Norris, M.D., Professor of Clinical Medicine in the University of Pennsylvania, and Henry R. M. Landis, M.D., Professor of Clinical Medicine, University of Pennsylvania; Director of the Clinical and Sociological Departments of the Henry Phipps Institute of the University of Pennsylvania, with a chapter on the Transmission of Sounds Through the Chest, by Charles M. Montgomery, M.D., and a chapter on the Electrocardiograph in Heart Disease, by Edward Krumbhaar, Ph.D., M.D. Fourth Edition, Revised. 954 pages with 478 illustrations. Philadelphia and London: W. B. Saunders Company, 1929. Cloth $10.00 net.

THE SURGICAL CLINICS OF NORTH AMERICA.—(Issued serially, one number every other month.) Volume 9, number 4. (Mayo Clinic Number—August, 1929) 208 pages with 72 illustrations. Per Clinic year (February, 1929 to December, 1929.) Paper, $12.-00; Cloth, $16.00. Philadelphia and London.

PHYSICAL EXAMINATION AND DIAGNOSTIC ANATOMY.—By Charles B. Slade, M.D., formerly Chief of Clinic in General Medicine, University and Bellevue Hospital Medical School, New York. Fourth Edition, thoroughly revised. 12mo of 196 pages with 43 illustrations. Philadelphia and London: W. B. Saunders Company, 1929. Cloth, $2.00 net.

REGULAR MONTHLY MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY HELD AT THE GRILL, WOODSIDE BLDG., MONDAY, NOVEMBER 4, 1929.

This meeting, which was held in the form of a joint banquet with the Dental Society, was called to order by the President, Dr. J. G. Murray at 8:10 P. M. with eighty-four physicians, dentists and guests present.

The invocation was offered by Dr. E. W. Carpenter.

Following the banquet, our first visiting speaker was introduced, Dr. Samuel L. Silverman (D. D. S.) of Atlanta, Ga., who made a splendid address on Impacted Teeth, Hare-Lip and Cleft Palate. Dr. Silverman first stated that the power of growing teeth may be likened to that of growing roots, calling attention to the fact that a growing, impacted tooth could produce a great deal of pressure on surrounding structures. These impactions are frequently undiagnosed, because of the neglect to take X-rays and the result is that the patient goes from office to office until someone thinks about this important diagnostic procedure. Cystic formations often result from impacted teeth, and the lips may become numb from actual severance of the mandibular nerve by the abnormal placement of the tooth. Symptoms may also arise from unerupted teeth. Fractures of the mandible may also result from the great pressure exerted by an impacted tooth. Dr. Silverman, then made another plea for more X-raying of these suspected conditions.

Cleft Palate and Hare-Lip.

Dr. Silverman mentioned that there was a great tendency to hare-lip and cleft palate in South Carolina children, but offered no explanation. In dealing with cleft palate only, he recommended that operation be delayed until after the eighteenth month. If the cleft is through the gum, operation should be performed immediately, just as soon after birth as possible as there is little or no nervous shock to the patient during the first hours of life. The mortality from this operation in Atlanta and Chicago is only 2 per cent.

Dr. Silverman then mentioned, in conclusion, that a great deal of care should be used in the removal of impacted teeth, and that brute force should never be resorted to.

This very enlightening address was profusely illustrated with appropriate lantern slides.

The President, then introduced as our second visiting speaker, Dr. Kenneth M. Lynch of the Medical College of the State of South Carolina, Charleston, who gave us a very masterly discussion of Protozoan Diseases of the Mouth. He called attention to the fact that the mouth was the most abused cavity of the body considering the great variety of foods ingested, the temperatures at which they are ingested, the mechanical and traumatic irritation of the buccal mucosa, the abuse of the tooth-pick and tooth-brush, the powerful muscles of mastication, and the great likelihood of a break in the lining of the mouth. Dr. Lynch then stated that there were only two protozoa that cause pathology in the mouth, namely the endamoeba gingivalis and the trichomona buccalis.

The amoeba is present in the mouths of the majority of people who have passed middle life. Its life is very short. It is the first known animal parasite discovered and since it has been discovered and re-discovered a number of times. Emetin and ipecac are of no real value in the treatment of amoebic infections. Stovarsol is of greater value than any other known drug and should be tried in all cases. This infection is spread by personal contact, common drinking cups, etc. The amoeba lives in the recesses of the gums below the margins, causing varying degrees of pyorrhoea, is no scavenger as was formely believed but lives off of live and dead leukocytes and red blood corpuscles. Dr. Lynch stated that the loosening of the teeth in the sockets might be due to the amoeba getting its food from the inner lining of the gums, excreting nucle-proteins, rich in phosphorus, which in turn unites with the calcium of the bony lining of the alveolar sockets to form the "tartar" of the teeth.

The Trichomona is also present in pyorrhoea, also in 40 per cent of mouths in persons over thirty years of age. Dr. Lynch discussed this organism very briefly, explaining that the amoeba is the more important protozoan.

There being no further business the meeting adjourned at 10:30 P. M.

Irving S. Barksdale, M.D.,
Secretary.

RIDGE MEDICAL ASSOCIATION MEETS

The Ridge Medical Association, as guests of the Ridge Ladies Auxiliary, held its regular meeting in the lovely home of Dr. and Mrs. James Crosson Monday evening, October 21, 1929.

Promptly at 7:10 o'clock, in spite of the inclemency of the weather, these eminent men began assembling. Immediately upon entrance to this most spacious and comfortable home, (especially suited for functions of this kind) they found their environments entirely changed.

The exchange of handclasps, the most kindly reception was purely indicative of Shakespeare's 'great welcome which makes a merry feast;' the hospitality which is characteristic of these good people.

Going into their business session interest was centered chiefly upon topics of Meningitis and Carbuncles. Especially fortunate was the Association in having as its honor guest Dr. J. C. Harper of Greenwood. Dr. Harper talked most

interestingly and instructively on Nutrition, referring especially to the proper food for school children.

The sound of chimes caused a change in the program and each betook himself to the dining room.

Hall'oween was manifest throughout the home —dainty cards, bowls of beautiful sunburst dahlias—and who knows but that this merry making may have discovered the future destiny of some one.

While partaking of a most nutritious and well balanced feast short speeches by various ones added to the enjoyment of the occasion. Another feature which was greatly appreciated was violin solos rendered by Dr. G. R. Westrope, Lexington County health physician. Dr. Westrope is master of his instrument and produces from it most meelingly the music from his soul.

Various committees were appointed for the Association by its president, Dr. O. P. Wise.

This meeting was well attended and the next meeting will be held in Batesburg to which the Legislative delegations from the three counties will be invited.

The Association unanimously voted their thanks to Dr. and Mrs. James Crosson for the use of their home, to Dr. Harper for his address, and to the auxiliary for the excellent supper.

The Auxiliary also had an interesting business session. Sketches of the lives of some of the doctors were read. A committee was appointed to complete this work and get it in proper form for the scrap book which our State president requested them to do some months ago.

Desirous of doing something to relieve suffering humanity, the Auxiliary voted to donate as liberally as possible to the Woman's building now being erected at State Park.

A committee was appointed to get up a program appropriate for Yuletide season which will be rendered at the next meeting in Batesburg.

Dr. D. M. Crosson has recovered and has resumed his work.

Dr. J. S. Black of Florida was here to see his father who is quite ill this week.

The Journal

OF THE

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12

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EDITORIAL

THE HOLIDAY SEASON COMES AGAIN

Elsewhere in this issue the President of the South Carolina Medical Association calls attention in an admirable way to the splendid progress made by the South Carolina Medical Association during the year. The tone of the President's letter to the members throughout the State is optimistic and inspiring. Dr. May sees continued progress during the coming year and extends cordial Christmas greetings to every doctor in the State. We wish to emphasize these sentiments and comments by our distinguished President. He has been indefatiguable in his efforts to bring about an enthusiastic spirit for a more united and a larger organization. All of the other officers have endeavored to cooperate to the fullest extent. The Association has prospered in all of its departments. The Journal has been favored by more scientific papers worthy of publication than in any year for a long time. These contributions constantly reflect a much better educated profession and a desire on the part of its members to give the benefit of their investigations to the scientific world. The weaker County Societies in several sections of the State have been organizing mergers which is in line with the trend of the times in the business world. This plan appears to work well so far. The District meetings have been extraordinarily successful.

The large city societies continue to have splendid meetings well attended. As we approach this glad season of the year we are inclined to feel pretty well satisfied with the scientific progress of the medical profession but there are economic problems looming on the horizon pressing for study and solution. Intensive effort will surely point the way to the light. We join the President in extending most hearty felicitations to every doctor in South Carolina.

CONFERENCE OF SECRETARIES AND EDITORS OF STATE JOURNALS

One of the most potential and inspiring organizations is that of the Secretaries of State Medical Associations and Editors of State Medical Journals which meets at the headquarters of the A. M. A. each year. The Secretary-Editor attended the meeting this year, November 15-16 in Chicago, having missed only one meeting since the inception of the Conference some twenty years ago. South Carolina has been repeatedly honored in an official capacity and on the programs at different times. About twenty-three years ago Dr. Walter Cheyne, Secretary at that time of the South Carolina Medical Association interested himself in a get together of the official family of State organizations at the annual meetigs of the A. M. A.. Dr. Cheyne was elected the first President. The meetings were small and largely social in character. In time the meetings were held irregularly. Then the idea of holding the meeting in the magnificient A. M. A. headquarters in Chicago met with favor and the organization put on a permanent basis. Untold benefits have been derived by the members since this plan was inaugurated. Each year the most urgent problems before the medical profession are discussed. The Secretaries and Editors come in intimate contact with the officials of the A.M. A. as well as the personnel of the headquarters itself. There are some five hundred employees at the headquarters building and numerous headquarters of councils and departments including a colossal publishing business. These annual pilgrimages with the exchange of ideas add tremendously to the efficiency of the Executive Officers of the State Medical Associations.

UNDULANT FEVER

One of the special features at the Charleston meeting this year was the interest shown in the recent discovery of Malta Fever in our State. We are not in position to estimate the exact number of clinical cases in the State since the first case was reported by Dr. Cooper early in 1928. It is probable however that the number is considerable and possibly on the increase. The disease appears to be essentially a small town and rural problem. It is interesting to note the results of tests made by our State Board of Health Laboratory as follows:

Br. abortus tests from November 1, 1929, to September 1, 1929:

Date	Positives	Negatives	Total
11—1-4—30	33	154	187
5—1-8—31	36	204	240
	69	358	427

It is certain that the disease is rapidly assuming a position of first importance in the medical literature of the world. The disease thus far has baffled the skill of the most astute observers as to its prevention and treatment. It is a disabling entity of serious proportions lasting from a few weeks to months or years. It is no respecter of persons. Some of its shining marks have been our most brilliant laboratory workers in many countries. South Carolina doctors may well spend several years in further investigations. An admirable Summary appears under the head of Current Comment in the Journal of the American Medical Association, November 9, 1929 as follows:

"Either undulant fever is rapidly increasing in this country or, as is perhaps more likely, our knowledge of the occurrence of this disease is making rapid strides. Last year in the United States 367 cases were recorded and it can scarcely be doubted that many more escaped record. Diagnosis is by no means simple apart from the agglutination test, the symptoms being readily confounded with those of typhoid. During the twelve months from April 1, 1927, to April 1, 1928, all blood sent for the Widal test to the Danish Serologic Institute was examined for agglutination of Brucella abortus. A postive agglutination in a dilution of 1:100 was found in more than 10 per cent of the specimens thus submitted from 2,150 patients. Wherever routine laboratory search has been made a surprising incidence of the disease has been discovered. On the other hand, in Great Britain, where the seventh human case was only recently recorded interested physicians are demanding that blood tests be made in all cases of pyrexia of unknown origin. Even the "undulant" character of the fever is not to be relied on for diagnosis. Among forty-five cases reported in New York State during the last year, it is stated that in no less than sixteen cases the disease was not undulant in character. The fact that two thirds of the victims were men is considered a 'striking feature' of this report; it is characteristic of the disease, however, that the incidence should be higher in males than in

females. In the Danish experience males outnumbered females by 160 to 49. Hardy reporting on the same disease in Iowa, records ninety-eight males to twenty-seven females. Of twenty-seven cases reported recently in Schleswig Holstein, twenty-one were in males. All observers are agreed that the disease is much more common in middle life than it is in childhood or old age. Since old and young, male and female, are alike exposed to the hazard of drinking raw milk, the excess morbidity of middle aged men may be perhaps related to the occupational hazard to which attention has already been drawn. Of the twenty-seven patients in Schleswig Holstein, ten were farmers or farm laborers, two bailiffs, one a veterinary surgeon, one a physician, one a slaughterer and twelve followed other occupations. Clark has pointed out that there are really two types of human undulant fever in this country: one due to infection with Brucella melitensis A, which is usually caused by drinking raw milk, and the other due to Brucella abortus, which is contracted also in other ways, such as by removing a cow's placenta or by killing pigs. A specific treatment of this disease is not yet available. The use of serums has proved disappointing. Vaccines have given more encouraging results according to recent reports from the continent. In particular, an antigen prepared from dried Brucella abortus has seemed efficacious in a small number of cases. In this country Hoffman has suggested the use of acriflavine hydrochloride, which he feels has shortened the duration of the disease in some of his cases. All attempts to shorten this tedious and exhausting infection deserve encouragement. Until more experience has been gained, however, symptomatic treatment directed chiefly against fever, pain and the secondary anemia of the later stages of the disease is the method of choice."

BUREAU OF PUBLICITY FOR STATE HEALTH DEPARTMENT

We publish elsewhere in this issue letters of approval of the proposition to establish the Bureau of Publicity in the State Department of Health. The Legislature will soon convene and it is highly important that every County Society in the State hold meetings with the members of the Legislature to inform them about the necessity of such a Department. In the event that this plan cannot be carried out the Legislative Committee of each County Medical Society should be instructed to keep in touch with the delegation as the Bill proceeds through the Legislature. This is one of the chief measures sponsored by the State Medical Association and it should have the enthusiastic support of the entire profession.

PRESIDENT'S PAGE

By C. R. May, M. D., President South Carolina Medical Association

After visiting quite a number of medical societies in different sections of the state, I am delighted with the prospects of Greater Organization, which I have been earnestly trying to effect since the beginning of my administration. We have had the aid and support of the members, Councillors, and other officers of the association, and especially the services of our capable and efficient secretary, Dr. Hines.

The meeting of the Tri-county Medical Association, Abbeville, Greenwood and Laurens, was a splendid success, and will make a strong and useful organization. There were interesting papers read and freely discussed, and the meeting wound up with a wonderful dinner and friendly associations. This will insure increased membership. The meeting was held at Abbeville.

I attended the fifth district society at Rock Hill a short time ago. The attendance was very large, with visiting physicians from Charlotte and other sections of the up country. They had a very attractive program, and were enthusiastic and anxious to increase their membership and friendly associations. They entertained handsomely with a splendid dinner.

Our sixth district medical association, The Pee Dee Medical, met at Florence last week. This society has always been active and is the second oldest medical society in the state. The attendance was good and the papers very instructive. The Florence County Medical Society entertained with a big dinner in the beautiful library building. They are wide awake and I am sure will have a large increase in membership.

The prospects of having one of the best meetings the South Carolina Medical Association has ever had are excellent. The Scientific Committee has been very active in its work of getting up an unusually attractive program. They were extremely fortunate in securing such distinguished men as Dr. Morgan and Dr. Park to address us. Florence being about the center of the state, and with the good highways we now have, it will be easily accessible to people living in any part of the state. I am sure that we will all enjoy this meeting, for everything is being worked out with the determination to make it one of the best meetings in the history of the association.

At the Charleston Meeting, Dr. Tyler of Greenville, Chairman of the Committee on Public and Instruction, read a paper on public health matters, and a committee was appointed to advise the best method to approch the Legislative mind, and they suggested that each county society have a meeting once a year at which public health measures be stressed, and to ask their Senators and Representatives to attend this meeting so that they might be fully conversant with all activities concerning public health measures. I hope that each county society will comply immediately before the legislature convenes. The Public Health and Instruction Committee after studying the matter for two years and consulting with some of the officers of the South Carolina Medical Association advise that we put on a Department of Health office, in other words, a publicity bureau of the State Board of Health. If we are to keep up with the advance of general health measures, as some other states are now doing, we should get squarely behind and heartily support this movement.

Medical Economics is a subject that is being discussed at present more than any other throughout the medical world. There perhaps has never been a time in civilization when medical men play as important a part in the world's progress. There perhaps never has been a time when the economic conditions have been so greatly disturbed as now. There is no conflict between the ethics and ideals of medicine with the business side of medicine. All doctors are not good business men. Few of them are, but the laborer is worthy of his hire, and there should be a definite business program instituted by every doctor on just as sound business principles as successful banker would conduct his affairs. Those who can must pay, those who cannot are not expected to pay. It is necessary for our own personal welfare and the future of our profession, that the economic side of medicine be discussed. This should come up for free discussion in the county societies. In order for every doctor to know the status of this question, it is necessary that he belong to and attend his county society meetings. If we as doctors and members of organized medicine do not look after what concerns us, someone or some agency will sooner or later take it up and look after and manage it for us. Our indifference is bringing about in a very insiduous way a tendency toward State Medicine or some group control of our affairs and activities. By belonging to our county societies and discussing our economic problems we can stem the tide that is slowly but suerly turning toward control of our profession by other than medical men. I am looking forward with a great deal of interest to the report of our recently appointed committee on medical economics.

Christmas is not far off so I will take this opportunity to wish for each and every one of you a Merry Christmas, a full pocket-book, a good digestion, a contented mind, and the ability to make your loved ones happy.

ORIGINAL ARTICLES

THE RECTAL ADMINISTRATION OF QUININE IN THE TREATMENT OF MALARIA

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Cecil Rigby, B.S., M.D.,
Spartanburg, S. C.

In reviewing the literature for treatment of Malaria, I have not found the method suggested above, however it may have been reported before.

The method of administration of Quinine seems to vary with different authors. Quoting from Dr. Reed on the subject of administration, this statement is found. "Never give Quinine under the skin or into the muscle." Other authorities advise against the administration of Quinine intravenously, giving as their reason that any Intravenous administration is not without an element of danger, and also as an important reason the fact that Quinine given intravenously only remains in the circulation about two hours, and what is desired is to have some quinine in the blood continuously during the period of treatment. Intravenous administration is recommended by some authorities only for acute cases, however all seem to agree that administration of quinine by mouth is always a safe and effective procedure. Upon the supposition that the two methods of administration mentioned above, namely Intravenous or Intramuscular administration, are not as good as administration by the Intestinal route, has been based this report.

In cases of Malaria, where these exists marked nausea and inability to retain even fluids by mouth, the intravenous or intramuscular method of giving Quinine would seem to be the only available methods. Keeping in mind the disadvantages of both these methods and also realizing that the patients are often dehydrated from continued vomiting, and need fluid in any case, it was decided to dissolve the Quinine sulphate or hydrochloride in normal salt solution and give as a rectal drip to patients affected in this manner. In the case mentioned below 30 grains in 24 hours were given with 1000cc of normal salt solution, and apparently a large amount of quinine was absorbed, as the patient complained constantly of "ringing in her ears," while under treatment a year ago 15 grains by mouth did not cause that sensation. We have also tried dissolving the quinine in distilled water and adding glucose to this solution to be used as a rectal drip. The quinine seems to be absorbed just as well in this solution as in normal salt solution, and there is the added advantage of the glucose to give nourishment to a patient who has been unable to retain food for several days.

The following is a report of a case in which the above method was used with apparently splendid results. The method had been used on a number of other cases during the past year with equally good results. In every case the temperature after the first 24 hours of treatment has been lowered, so that on no day after treatment has the daily highest temperature reached the height of the temperature before treatment.

Mrs. H. G. White, female, married, age 29, a resident of S. C. Family history, negative. Past history—patient has had usual childhood diseases, but otherwise has had excellent health up to the time of first pregnancy. First and second chill stillborn, third child was delivered alive by Caesarean section in February, 1926, the fourth child by Caesarean section in Nov., 1927. The appendix was removed at the first operation. Convalescence was uneventful each time. In March 1925 patient was in the office for a routine examination, no special complaint except had not felt as well as usual. The examination was essentially negative with the exception of the blood examination. This showed a slight secondary anaemia, a leucopenia and several Tertian Malarial parasites. The patient was treated for two months at that time with quinine and in the fall of 1926 and 1927 she was given quinine again to prevent further trouble. At no time during this time did the patient have an acute attack of Ma-

laria. On October 9, 1928, patient was taken suddenly with a severe chill. The temperature at this time was 104, and the patient had marked nausea and vomiting. The chill was followed by profuse sweating and severe headache. The physical examination at that time was as follows—Patient is a well nourished young woman, lying in bed looking very ill. Face flushed, skin moist and hot to touch. Temperature by mouth 104, pulse 96, blood pressure 130/90. Head examination reveals no tenderness over sinuses or over mastoid region. *Eyes*—pupils react to light and accommodation, regular, equal, extra ocular movements normal. *Nose*—No obstruction to nasal breathing on either side. *Ears*—No tophi present, drums have normal appearance. *Mouth*—Teeth in good condition, tongue slightly coated, pharynx slightly injected, tonsils atrophic and anterior pillars slightly injected. *Neck*—No enlargement of glands in the neck. Thyroid isthmus and both lobes very slightly enlarged. *Chest*—Expansion of both lungs equal and normal. No dullness on percussion in front or back. No rales heard. *Heart*—Not enlarged, no thrill or shock felt over precordial area. No murmurs heard at apex or base. Sounds at apex regular, rate faster than normal Pulse at wrist easily felt. *Abdomen*—No masses felt. No rigidity felt on palpation over abdomen. Mid-line scar of old operation seen. No tenderness over gall-bladder or kidney region. Reflexes normal, no stiffness or paralysis of arms or legs. *Pelvic Examination*—Negative. *Rectal Examination*—Negative. *Urinalysis* shows sp. Grav. 1022, faint trace of albumin, no sugar. Miscroscopic examination shows few w. b. c. and epithelial cells no casts. *Blood Exmaination*—R. B. C. 4,000,000. w. b. c. 5000 Hb. 60%. P. M. N. 58% P. M. E. 1% P. M. B. 1% L. L. 5% S.1 20% L. M. 8% Tr. 7%. No anisocytosis or poikilocytosis, platelets increased, erythsocytes paler than normal, several tertian malarial parasites seen. The patient was given quinine by mouth as soon as the blood was found to contain malarial parasites, but it was soon found that the patient was unable to retain it. The next day the chill was repeated and the temperature rose to 104.5 with no lessening of the nausea. The patient was taken to the hospital and a rectal drip of normal salt and quinine was given by rectum. Ten grains of quinine was dissolved in each 500 cc. of normal salt solution and three 500 cc. solutions were given in 24 hours, making 30 grains of quinine given in that time. After the first day 15 grains were given to each pint and two pints given in 24 hours. Glucose was added to the solution for nourishment. On admission the temperature was 104, on the second day it was 102. On the last day the temperature reached a height of 99.4. After 6 days of treatment the nausea was so much better that the patient could take quinine by mouth and retain it, so the drip was discontinued. The patient left the hospital at the end of the second week and continued to take quinine for two months. She is now in very good condition.

It might also be added that this method of rectal administration of quinine has been used to advantage in several surgical cases, in which the patients have had a sudden flare up of old Malaria, following an operation and it has been thought wise not to upset the stomach by giving quinine by mouth. In no case was quinine given unless the Malarial parasite was firrst demonstrated in the blood.

Conclusions

Incases of Malaria where the patients are unable to take quinine by mouth, this method is recommended because of the following reasons:

1. To give quinie by rectum is probably safer than by either intravenous or intramuscular injection.

2. It is much easier to give quinine by rectum than by the above methods as the treatment may be given by the nurse without the presence of the doctor.

3. The rectal drip offers a good method of giving fluid to a patient dehydrated from continuous vomiting while at the same time providing a medium through which the quinine may be administered.

*ACUTE RHEUMATIC INFECTION IN CHILDREN

By F. K. Shealy, M. D., Clinton, S. C.

The term rheumatism is the most carelessly used word in medical nomenclature. There is no condition in which there is redness, pain and swelling of joints and muscles that this term has not been applied at some time or other. The modern conception of the word limits to denote a particular symptom complex produced by a systemic infection and its resultant pathology. The ideal toward which we must strive is not altogether the early detection of the manifestations of the rheumatic infections but the ability to detect and circumvent the conditions of diathesis, environment or infections which singly or in combination produce acute rheumatic infections.

The prevention of rheumatic infections therefore in children and its adequate treatment, are matters of the gravest importance if we are to rear a future race of strong men and women. Investigators at Lyman Hurst Heart Clinic found that 75 to 80% of acquired organic heart disease gave a history of rheumatic infection or chorea in childhood. The problem of heart disease rest almost entirely with the problem of rheumatic infection. English investigators after prolonged study find that 2/3 of the heart cases that come under their observation commenced between the ages of 5 and 15, the period of rheumatic incidence. The problem as can be seen of heart disease rests almost entirely with the problem of rheumatic infections. The causative factor seems to pick out the endocardium very much at T. B. picks the lung tissue.

Opinions as to the etiology are not quite so clear cut as they were twenty years ago. Doubts are being thrown on the causal connection between the presence of the Streptodiplococcus and the disease. Bacteriologists have not given us very definite conclusions. The presence of a discoverable pathogenic organism is not, in the present state of our knowledge, quite sufficient explanation. There must be a secondary factor besides the tonsils, and it must be widened to include a disease tendency, unfavorable surroundings, heredity, insufficient clothing, poor and improper food, intestinal trouble, bad teeth and sinus involvment. When the rheumatic virus is once introduced, it may survive in the tonsils, even in a small left in piece or in the heart even after the primary attack is over similar to the spirochete or plasmodium which will remain in their hiding places ready to light up on slight provocation. The infecting agent has as a port of entry the lymphatic tissues of the pharynx. are usually discreet but may be conglomerate. disease seems to be more frequent near bodies of water than inland. One attack does not confer immunity but renders the patient more liable to subsequent attacks. The rapid swelling of the joints with a prompt subsidence suggests that this disease may be caused by a toxin rather than a micro organism. The streptococcus plays an important part as a secondary invader at least but we may have to look for a filterable virus or an ultra miscropic organism. In its manifestations of joint pains and tenderness it resembles serum sickness.

A soft systolic mumur at the apex may be the first symptom to attract attention. The child early shows the influence of the toxin. It is unstable mentally and physically. Little is required to throw it off balance. The skin is of a fine waxy hue and the child sweats in patches while other parts of the skin is dry. They are liable to attacks of asthma, vomiting, gastralgia, gastro intestinal disorders. They are incapable of sustained effort and soon show signs of cardiac arrythmia with complaints of dyspnea on slight exertion. The mental instability of these children is clearly evidenced by the constant association of chorea, with rheumatic infections. The earliest signs of rheumatism may be very slight in the extreme and difficult of detection. These symptons may be so slow and so insidous yet so surely progressive in character that even when fairly well developed they neither give the child discomfort nor the parents anxiety and may be accidentally discovered when the child is under observation for other causes. These attacks may come on slowly with a slight pain in one or more joints with some swelling but little or no redness, slight elevation of temperature, 100-101.

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*Read before the Third District Medical Association, Laurens, S. C., 1929.

The arthritis may attack several joints in succession. The ankles, knees, small joints of the feet and wrists. There may be fleeting pains in the muscles yet not severe enough to keep the child in bed. Growing pains located in the ham string muscles behind the knee may cause only a slight limp lasting a few days.

An attack may also be ushered in by a mild grade of tonsillitis, drowsiness, impairment or even loss of appetite, abdominal pains more or less vague in character with a febrile reaction of variable intensity. The muscle fascia may be involved without joint involvement. The sterno cleido mastoid is frequently involved coming on suddenly and often accompanied or followed by a heart murmur. The rheumatic chain as Osler termed it has many dissimilar links the connection of which with rheumatic fever is not always easily established. We can name among these links chorea, tonsillitis, rheumatic skin affections especially rheumatic nodules, acute rheumatic poly arthritis and rheumatic carditis.

The blood picture is that of a secondary anemia which is hard to combat. There are few diseases that produce so great a destruction of hemoglobin and red blood cells in the same length of time as rheumatic infections.

Aschoff in 1904 described his submiliary nodules in the heart muscle which seems trustworthy histologic findings at least in cases dying in the acute stages. In cases of long standing, however these nodules undergo fibroid organization.

Rheumatic fever has great invasive powers and may produce lesions in almost any part of the body. The infection is generalized with protean manifestations in muscles, fascia, tendons, joints, serous membranes, the respiratory tract, the brain and the heart. Reinfection frequently occuring and lasting over long periods of time. It is a fairly common disease most frequent between the ages of five and fifteen. It is, however, a most serious disease because of its predilection to attack the heart muscle and its great tendency to recur and each recurrence to add to cardiac lesions.

Heart involvement may occur within twenty-four hours after the onset of the disease. The toxin of rheumatic infection has a marked relaxation effect on the heart giving rise to a loss of tone and dilatation of its chambers. There may be a lasting aortic as well as a disappearing mitral as far as ausculation is concerned. Double heart involvement seldom occurs during the first attack. The joint involvment may be so slight and trivial as to even escape attention. These severe cases are characterized by dyspnea, precordial pain and high temperature. These symptons may be preceded by other signs as loss of weight, slight daily rise in temperature, increased pulse rate, diminished exercise tolerance.

In 1108 cases of rheumatism observed by Dr. P. J. Poynton carditis occured in 60% of the cases, arthritis in 56%, chorea in 55% and tonsillitis in 30%. In 90% of the school children inspected by Dr. Dobbie where there was a structural alteration of the heart there was a history of rheumatic fever, definite chorea, recurrent pains and repeated tonsillitis.

Rheumatic nodules occur in about 11% of cases. They are pathognomonic and usually occur in severe cases. They are most commonly seen in cases with chronic and recurrent rheumatism who have badly damaged hearts. While these cases do recover, however, these nodules do point to a poor prognosis owing to such a severe type of infection. The histological picture of these nodules is similar to the Aschoff bodies. The nodules may be movable but more often are firmly fixed to tendons and fascia around the joints and on the scalp. They are usually discrete but may be conglomerate. When seen at a certain angle they glisten and feel like grains of rice. They appear in crops and may last for weeks and months having a tendency to recur.

The patient who has had rheumatism should avoid getting wet or chilled or subjected to damp living quarters. They should undergo a gradual hardening process. All forms of intestinal fermentation should be treated and the body protected by warm clothing.

During the past few years there has been engendered in the minds of medical men an unbounded spirit of antagonism toward the tonsil. The pendulum has been swinging toward extreme radicalism, holding the tonsil responsible for all ills of childhood and adolescence. If the virus or what not is lodged in the heart, synovial membrane or the subcutaneous nolul-

es, the patient will have recurring attacks even if the tonsils are removed. The frequency of tonsillitis followed by rheumatism and chorea have led investigators to regard the tonsils as the port of entry and possibly an etiologic factor in rheumatic manifestations. Of 180 cases with their tonsils removed studied by Ingerman and Wilson, they found rheumatic fever as frequent as in the control group. Hunt in a study of 144 cases of acute rheumatic fever in children in Guy's Hospital, London, found recurrences in 53% of 66 cases in which tonsil enucleation had been done and 42% of 78 cases where operation had not been done. This possibly might have been due to the fact that deep in the crypts of the tonsil bacteria harbor. Removal liberate these and light up an attack.

Treatment: The joints may be wrapped in cotton or local applications of Mag. Sulph. lead water and opium or oil of gaultheria. Immobilization where possible to prevent too frequently handling of painful and swollen joints. Water in abundance and a febrile diet. There is no specific serum. Owing to uncertain etiological factors we have to be content with giving fairly large doses of Sodium Salicylate either alone or in combination with Sodium Bicarbonatte as it tends to oercome toxemia and slows the heart. This should be continued a week or more after the symptoms have abated. Simple follicular tonsillitis is a great power of mischief and removal is justified if they are diseased. Certain suggestions might be offered in the treatment of rheumatism as prompt confined to bed with prolonged rest over a period of three months or more where there is heart involvement and until its rate becomes normal and signs of fatigue are gone. Maintain proper nutrition. Remove foci of infection as bad teeth, diseased tonsils and sinus trouble before the heart becomes crippled. Careful daily auscultation of the heart. The use of blisters or the ice cap over the heart at the least indication of trouble. Prevention of relapses by the establishment of hospitals for cardiac cripples as for T. B. cases, thus healing as far as can be the heart lesions by rest and regulated exercise. The horizontal position which reduces blood pressure and cardiac action. Resistance should be built up in the tissues to overcome the tendency to future attacks. After puberty the tendency diminishes.

Out of all the common diseases of childhood, the most to be dreaded is scarlet fever and rheumatic infections while not always killing yet frequently maiming for life.

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*THE USE AND ABUSE OF PROLONGED IMMOBILIZATION IN PLASTER-OF-PARIS AND OTHER SPLINTS

By Austin T. Moore, M.D., Columbia, S. C.

The orthopedic surgeon necessarily comes in contact with a great many "bad result" cases. By no means are all bad results due to negligence or lack of skill on the part of the attending physician. Particularly is this true in regard to fractures. Many patients are not cooperative. Either through ignorance or failure to appreciate the dangers entailed, they neglect to follow through the after-care as instructed. Many do not return for redressing, physiotherapy, etc., because of the fact that they feel they are financially unable to pay for the visits. Some have an idea that all that is necessary after the fracture has been reduced, is to keep the splints on from four to eight weeks or more, and everything will be all right. It is just for such reasons as this that each physician attending a fracture case should be particularly careful to warn the patient that if a cast or splint *is* kept on continuously for a number of weeks, everything will *not* be all right in the majority of cases.

Because plaster-of-Paris bandages can be easily made and kept, and practically any type of simple fracture can be handled by a plaster cast, this means of treatment is very commonly used; but because of the difficulty of bivolving a plaster cast, frequently it is left on until ample time has elapsed for bony union to become perfectly solid and no further support is felt necessary. This treatment may frequently lead to unsatisfactory results and normal function may be delayed for a long time, or never return. Even if there is perfect anatomical reposition of fragments and x-rays can scarcely demonstrate the site of fracture, if the

*Read before the Second District Medical Association, Saluda, S. C., July 17, 1929.

patient has not the same functional use of the part just as before the accident, he is as a rule, dissatisfied and may even institute legal proceedings.

There are a few cardinal points in the treatment of fractures that can be carried out anywhere the observance of which will lead to better end results. First among these is the full understanding on the part of both physician and patient that when the fracture is reduced, the treatment has just begun. An axiom that would be well for all physicians to remember is that a properly reduced fracture become increasingly more comfortable. If swelling increases or pain persists and grows worse after retentive apparatus is applied, it is a sign that something is wrong. That patient should never be given anodynes or opiates and allowed to go along until the acute period is over. An x-ray picture should be made, if this has not already been done, to assure that the fragments have been properly reduced, the part should be elevated high enough to reduce the swelling, or the dressing should be completely removed to determine if there is any obstruction to the normal circulation. There are two ways in which the circulation can be impeded —one by internal, the other by external pressure. In internal pressure, the circulation is shut off by pressure within the part itself. The bones have a certain space about them limited by the skin and fascia. Within this space, course all of the venous and lymphatic channels. When bones are fractured and bady displaced, this space is encroached upon, and the return flow of blood and lymph is shut off, causing oedema and swelling. Massive hemorrhage with blood extravasation throughout the soft tissues may produce internal pressure.

External pressure is produced by a constricting cast or bandages too tightly applied. A splendid illustration of this is seen in forearm fractures. Over the dorsal and ventral surface of the forearm just above the wrist there is a large plexus of veins that can be readily seen when the arm is hanging by one's side, or when a constricting band is placed about it higher up. To shut off both of these venous plexuses would necessarily produce a great deal of swelling, and one of the *best* ways to do this is by using splints with a pad over the upper fragment on one side, and the lower fragment on the other. Pads such as these are usually superfluous as there is no particular muscle pull to displace a properly reduced fracture in this region. In treating ordinary Colles' fractures, probably more uniform good results would be obtained if we would disregard the fracture after it has been reduced and treat the function of the hand and wrist. A famous Philadelphia surgeon once said that the only dressing necessary after reducing a Colles' fracture is a band of adhesive about the wrist. This warns the patient's friends that something is wrong and prevents them from shaking hands with him too vigorously. The hand is primarily a prehensile organ, and if its grasping qualities are lost, the function of the entire upper extremity is seriously impaired. What good are the arm and forearm if the hand is useless? The chief function of the arm and forearm is to place the hand where it can be used.

Frequently the orthopedic surgeon is called on to treat the hand with all its fingers completely extended, and only a few degrees of motion possible in any of the joints, and this is very painful. Often the thumb and forefinger will not meet, so he is unable to pick up even very light objects. X-rays show diminution of joint spaces with absorption of lime salts about the joints. Inquiry into the patient's history reveals that he has had a fracture, or infection, or tendon laceration of some part of the forearm. The injured part had been placed on a straight splint extending to the finger tips and allowed to remain there six or eight weeks. Sometimes such hands can be completely restored; sometimes they are irremediable. What causes this? Prolonged immobilization and swelling due to internal or external pressure. An exudate is thrown into all of the soft tissues about the joints, producing an agglutination and adhesion of joint surfaces,—which might have been prevented by proper reduction, elevation, removal of constricting dressings or by wet compresses.

Another distressing condition, which may develop in a few hours from tight bandages and never be cured, is Volkmann's ischemic paralysis.

Following fractures of the leg, a frequent

disability is pain in the ankle joint and inability to dorsiflex the foot. In a large number of cases, the foot is put up in its usual relaxed position,—plantar-flexion—the tendo Achilles contracts and the space between the head of the astragalus and tibia is filled. Unless the astragalus is perfectly reduced underneath the center of the tibia in Pott's fractures, a chronic foot strain results. Simply turning the foot into varus will not replace the astragalus directly under the center of the tibia; for this motion is in the subastragalar joint. In Pott's fractures the misplaced astragalus and early mobility demand the most attention. Then the fracture will take care of itself.

The Delbet plaster splint is very useful in certain fractures of the lower 1/3 of the leg. It allows mobility of the knee and ankle joints. The patient begins to bear weight on the fractured extremity within the first week or two. His reward is union, perfect function and return to his occupation much earlier than when a circular cast is used.

Frequently, knees, hips, shoulders or elbows are more or less permanently stiffened after prolonged fixation dressings. Particularly is this true in cases of arthritis, synovitis, and tenosynovitis. Wilhelm's principle of opening joints with an acute infectious arthritis and encouraging active motion during the time the joint is draining is of great benefit in many cases. Many joints have kept up their function under this treatment which otherwise would have been permanently stiffened and prolonged immobilization been carried out.

Non-union of bone sometimes results after prolonged immobilization. There is a stagnation of the circulation, and atrophy of all of the soft parts. The bone suffers the same change.

One should, as a rule, reduce a fracture as early as possible. The longer one waits, the more difficult does swelling and muscle spasm make the reduction. Swelling alone does not militate against reduction. The idea of waiting for swelling to subside has largely been discarded. One of the best ways to reduce swelling is to secure a perfect reduction of bony fragments.

All fractures should be seen from four to six hours after reduction and again the next day. Burning pain over bony prominences should suggest pressure sore. The pain may subside in a few hours, but the nerve end organs have become paralyzed, and on removal of the splint, a deep, well-developed pressure sore is found. Practically all fractured extremities should be elevated for forty-eight hours or more after reduction to prevent swelling. In most cases, some form of physiotherapy can be begun in a few days after reduction. If the dressing is a plaster cast, this can be bivalved. Usually, this is better accomplished at the time the cast is applied, when the plaster has just begun to set and can be cut easily. The upper portion of the plaster is later removed, the parts baked and gently massaged. If the splint is of metal or board, the bandages can be removed and the baking and massage carried on while the part rests on the splint. It is surprising how quickly the swollen, indurated, congested soft tissue will subside under this treatment and how comforting it is to the patient. This is continued every few days, and soon the parts can be removed from the splint, the fragments held supported by the hand while motion in the joints is begun. The so-called "relaxed motion" should be used at first, i. e., while all the muscles are relaxed, the joints are passively flexed and extended very gently and only up to the point of pain.

As soon as the slightest union has begun to occur, active motion should be started. It not only keeps up the tone and strength of the muscles, but stimulates the circulation so that swelling and stiffness subside and bony union takes place more rapidly than if the part is kept immobilized for a long time. In the treatment of a great many factures, by the time the cast or splint is removed, the functional use of the part should be back to normal except for diminished muscular strength.

To cut down the long period of disability after splints have been removed is of tremendous value. The patient can return to his occupation sooner and a great deal of time and money saved. An elaborate array of equipment is ideal, though not absolutely necessary. If infra-red heat lamps, diathermy, etc., and the services of an expert masseur are not available, a basin of hot soapy water and cocoanut oil for massage will enormously add to the like-

lihood of a satisfactory end result. Heat, before the massage, can be had from any common heat source.

If the attending physician is willing to give a little more of his time, and the patient is anxious to co-operate in every way, the percentage of good results in fractures or other cases that require splinting, can be definitely increased.

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*SOME OBSERVATIONS ON THE FIRST REPORTED CASES OF MALTA FEVER IN SOUTH CAROLINA

By E. A. Hines, M.D., F.A.C.P., Seneca, S. C.

The story of the investigations of Malta or Undulant Fever is fascinating in the extreme. To say that it is a new disease is probably a misnomer, inasmuch as the Hippocratic writings indicate its presence 450 B. C. It is a new disease entity in certain phases of its development in the Western Hemisphere and only discovered in South Carolina since this Association met at Columbia a year ago. From a survey of scientific programs and Journals the world over it would appear that Malta Fever is at the present time one of the most acute medical problems before the clinician, the laboratory man, public health agencies, child welfare organizations, the veterinarian, and the colossal animal and milk producing industries. Even armies and navies are not exempt. The disease is slowly but surely invading nearly all the States of the Union according to the most reliable sources of information. 157 cases from 24 States were reported to the U. S. Public Health Service in 1928 (as shown by the chart). The disease has been endemic on the

Undulant Fever—United States, 1928

States	Cases reported, 1928
Alabama	---
Arizona	6
Arkansas—(a)	---
California	11
Colorado—(b)	1
Connecticut	4
Delaware—(a)	---
District of Columbia—(a)	---
Florida—(a)	---
Georgia—(a)	8
Idaho	---
Illinois	3
Indiana—(b)	---
Iowa	44
Kansas—(a)	10
Kentucky—No Report.	
Louisiana	---
Maine	2
Maryland	8
Massachusetts	---
Michigan	8
Minnesota	13
Mississippi	---
Missouri	1
Montana—(a)	1
Nebraska	---
Nevada—No report.	
New Hampshire	---
New Jersey Not reportable.	
New Mexico—No report.	
New York	10
North Carolina	---
North Dakota	3
Ohio	6
Oklahoma	---
Oregon	9
Pennsylvania—(c)	3
Rhode Island	---
South Carolina—(a)	1
South Dakota—(c)	1
Tennessee	2
Texas—No report.	
Utah—No report.	
Vermont	---
Vorginia—(a)	1
Washington	1
West Virginia	---
Wisconsin	---
Wyoming—(a)	---
Total	157

(a) 11; (b) 9 months; (c) 10 months.

Mexican border for nearly half a century and was epidemic at Phoenix Arizona in 1922. That particular section of the U. S. is a great goat raising territory. Briefly in historic retrospect:

Surgeon Rear-Admiral Sir Percy Bassett-Smith, a distinguished British naval officer, in the Jour-Royal Normal service Oct., 1927,

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calls attention to the fact that: "during the Crimean War Malta Fever came into prevalence among the troops and that in 1859 Marston gave an accurate account of the disease including the post mortem appearances. In 1886 Bruce discovered the causative organism which was abundantly present in the spleen. A commission of naval, military and civil officers under the advices of the royal society with Sir David Bruce in charge worked out the details from 1904 to 1906. This definitely proved that in the Island of Malta and the Mediterranean area the disease was almost entirely due to the ingestion of infected goats milk, the animals at the time showing no evidence of disease, and as they were allowed to perambulate the streets and were milked from door to door the incidence in the general population rose high; it also explained how it was that so frequently cases admitted to hospital with any disease in which milk was used in the diet contracted the fever so that in the early part of the 20th century cases admitted for fracture, etc., went out with undulant fever and operations were if possible put off for fear of the disease."

Perhaps most American physicians gave little thought to Malta Fever until Col. C. F. Craig of the U. S. Army in 1905 reported a case in a nurse who had been engaged in nursing soldiers in the Washington, D. C. Hospitals. This was the first case reported in the U. S.. Col. Craig made the following observation just as pertinent for us here today as it was then:

"I am convinced that a careful study, by use of the Widal test and the agglutination reaction with Micrococcus melitensis, of many of the cases of obscure continued fevers which are prevalent in this country will result in the demonstration that Malta fever is by no means a rare disease in the warmer portions of the United States, and that many of the so-called anomalous cases of typhoid fever are in reality, instances of infection with the organism of Malta fever."

Interest lagged however until 1918 when Miss Alice C. Evans of the U. S. Public Health Service Laboratory demonstrated the definite relationship of the organism causing Malta fever in goats and the organism causing contagious abortion in cattle known as the Bang bacillus. Following swiftly these experiments were confirmed in many countries. World wide interest however was excited when Chester S. Keefer of Baltimore reported in the Bulletin of the Johns Hopkins Hospital, 1924, a case of the transmission of the abortus infection of cattle to man. Speedily cows milk and the possible infectivity of other animals for man became an important issue.

To emphasize how rare the disease has been considered to be in the western world, it is significant that at one of those delightful evening staff meetings of the Mayo Clinic, May 18, 1927 Dr. W. A. Plummer reported a case of Malta Fever and said only three cases had been diagnosed there up to that time. Again in that vast domain to the north of us the Dominion of Canada, the first case was reported in 1928.

What may the average South Carolina doctor expect to find in pursuing the investigation in his own practice as to the relative frequency of Malta Fever? The situation has been very well defined in the American Journal of the Medical Sciences for September, 1928, by Kern, as follows: "There is no characteristic clinical picture of abortus infection. Clinically indistinguishable from its twin, Malta fever, it must, like that disease, be described as an infection with an irregular course and an indefinite duration. This extreme variability and the simulation of half a dozen other diseases probably accounts for a frequent lack of its recognition. This variability of the disease cannot be too greatly stressed: Few physicians in this country, especially in the more northern sections have, ever seen a case of Malta fever. They either have no conception of the disease at all, or they remember vaguely that Malta fever is also called undulant fever because, they think, of its "characteristic" undulant fever curve. A perusal of the varied disease pictures presented by even this small series of cases will serve to convince the doctor of the futility of attempting to diagnose the disease on a clinical basis alone. What is needed is a wide spread clinical consciousness of the disease, and a high index of clinical suspicion, that will lead physicians to ask routinely for an abortus agglutination test in all cases of undiagnosed fever."

I shall endeavor to outline rapidly the result of my studies thus far of Undulant Fever in this State. I wish to give due credit to Dr. Ernest Cooper, Superintendent of the South Carolina State Sanatorium for having reported the first case. This was a child of about nine years, admitted to the Sanatorium early in 1928 and running an indefinite fever course over a period of about five months. The agglutination test on this patient was made at the Hygienic Laboratory in Washington and found positive in dilutions up to 1:320. Our State Board of Health Laboratory recovered from the blood a pure culture of the Br. abortus.

Case 2: A case occurred in my own practice as follows. On November 3, 1928, I was called to see a young white man, age 28, Chief of the Fire Department and shoe-maker by trade. I found him sitting by the fire and with a temperature of 102. He said he was "smoke sick" from fighting a fire in a large brick building two nights before at which time he vomited, had a chill and headache. This was at the time of the influenza epidemic so I diagnosed it as a case of influenza as I was not familiar with "smoke sick" cases and put him to bed. The fever varied from day to day with no other symptoms of importance and little discomfort. At the end of a week or ten days that diagnosis was abandoned and the possibility of typhoid fever considered. The Widal, however, was negative. Then the question of tuberculosis arose inasmuch as on investigation he had been steadily losing weight, his appetite had decreased and he had not felt quite well for a month before I saw him. This was soon ruled out. He was constipated for most of the time but had a diarrhea for three or four days. He had at no time any respiratory symptoms. He ran this irregular fever for three or four weeks. On December the 4th the State Board of Health Laboratory reported Br. abortus positive 1:100 and 1:200. He was sick three months and lost 18 pounds. Repeated tests show positive abortus yet. One was made as I was leaving for this meeting, May 4, six months after my first visit to the patient. Fighting fire probably percipitated his very acute symptoms.

Case 3: Reported by Dr. W. D. Senn, of Newberry.

The doctor was called to see a colored man. (mulatto) age about 56, on February 1, 1929. The patient was complaining of discomfort in legs and arms especially in joints and back in the left lumbar region over the left kidney. He had a cough, fever 103.5 and was constipated. The case was diagnosed influenza. At the end of two days the fever subsided only to return after two days more and go through the same course with joints more affected and the patient more anxious in appearance. This condition lasted for about three weeks during which time Dr. Senn was considering other diagnoses such as typhoid, malaria, etc., until he decided he did not know just what the patient had so he sent the blood to the State Board of Health Laboratory which was reported positive for Br. abortus infection. This patient was sick about six weeks and had the following complications:

Perinephritic abscess and abscesses in both ears.

Case 4: Reported by Dr. Hugh Smith of Greenville and through whose kindness I was enabled to make a personal investigation:

A white female nurse about middle age living in one of the prosperous mill villages, where she worked, became sick November 3, 1929, running a slight temperature but not feeling very badly, worked for a week, when she became generally sore and felt as if she might have rheumatism. At this time, she had a temperature ranging from 99-1/5 to 101. Her physician found a reddened throat and the patient had some cough. Nothing definite was determined and she was put to bed on November 10 for observation. She was confined to bed for five weeks, during which time her temperature ranged from 99 to 101. The most striking symptom was that usually each morning and afternoon, the patient felt quite cold as if she were freezing. She had no chill, the sensation of coldness would last two or three hours in the morning, and would be followed by a rise in temperature; this would be repeated late in the afternoon with a second temperature rise in the early evening.

After five weeks, she remained afebrile for three weeks when exactly the same symptoms recurred except that the freezing sensation occurred only once a day and her temperature only reached 99 and a fraction each afternoon.

This continued for 16 days when she again became afebrile for seven days; then again fever occurred for two days, following which she ran a slight afternoon rise about every third afternoon, January 15th.

During this time she remained quite constipated, had a good deal of gaseous indigestion and at no time, was there any diarrhea. Her widals were negative; the urine and stools were negative for ordinary tests; total white and differential counts were within normal limits on repeated observations. The patient lost about 40 pounds from the first of November until the last of January.

Case 5: Reported by Dr. E. T. Kelley, Kingstree.

Age 17, Sex Male. Single. White. Past history usual diseases of childhood and occasional attacks of acute malaria. Well, robust. Mode of onset, headache, malaise, general aching and chilly feeling, constipation, anorexia for couple of days followed by moderate chill and sharp rise of temperature.

Fever of Undulant type for two weeks usually lower in A. M. and highest around 8 o'clock P. M., temperature around 101 A. M., 103 P. M., but never leaving patient entirely, and ended by lysis.

Pulse ranged from 88 to 100 and dicrotic, otherwise normal. Respiration slightly accelerated with rise of temperature. Gastro intestinal tract normal throughout with tendency to gaseous formation, moderate constipation. Eruption appeared about the seventh day over entire body but more profuse over abdomen and chest, resembling color that of Typhoid fever. Macules were all sizes and generally three or four times that of Typhoid fever, on first appearance, as pin point and increasing in size very much like some cases of measles. Kidneys normal except slight trace of albumin during first week. Leukocytes 4680, polymorphonuclear, 66, small lymphocytes 34. Widal reaction negative throughout, Brucella Abortus positive.

There had been no contact with goats or swine. Source of milk supply determined and had been used raw. The Veterinarian made or had made a proper examination of cows and found to be negative. There was no history of Abortus but one cow had had fever when the calf was two weeks old, and was supposed to have had slight sepsis following delivery.

Case 6: Reported by Dr. H. S. Black, Mary Black Hospital, Spartanburg. Male thirty-four years old, white. During the month of October, 1928 patient complained of malaise, tired and exhausted feeling and loss of appetite. Had no headache, nose bleeds, nor other symptoms. Had to force himself to work, when previous to this he delighted in working. In November he went home from work complaining of fever and sweating. Went to bed and called his family physician who treated him for influenza. At the end of a week Dr. Black saw him in consultation and with the following history:

For one week patient had been complaining of profuse sweating, mostly in the afternoon and night and during twenty-four hours it would be necessary to change the bed linen and his night shirt from ten to twelve times as it would be drenched. His temperature would vary from 99½ in the morning to 102 and 103 in the afternoon. He had no headache but slight coryza and slight redness in his throat. He had no other symptoms nor signs that one could elicit. *Dr. Black was suspicious of undulant fever* and sent a specimen of the patient's blood to the State Board of Health Laboratory in Columbia to be examined. The report was positive. There was one thing that was particularly noticeable, that he was not dull nor stupid as is seen in typhoid fever and did not complain of any pain or discomfort except the profuse sweating. He was confined to his house for three weeks and after being out of bed one week, returned to work. Dr. Black examined him on March 7, and found him in good physical condition. His weight at the time of his sickness was 165, height 5 feet, 10½ inches, blood pressure 122/80, pulse slow and temperature varying from 99½ to 103. It is interesting to note that the patient had typhoid inoculation while in service in 1917, and Widal made at the Mary Black Clinic during his illness was positive, which was accounted for by the fact of his inoculation and not his present illness. Widal made at the State Board of Health Laboratory in Columbia, however, was negative.

Case 7: Reported by Dr. P. E. Assey, Georgetown.

Negro man, twenty-three years of age. The chief complaint was pain in the right lower quadrant, indigestion and fever.

Patient stated that the present illness began about March 1, and that he had been running a continuous temperature, had a complete loss of appetite, was nauseated and vomiting all that he forced down. At this time the patient had a temperature of 102(F). He showed tenderness in his right lower quadrant to deep palpation.

During the following week the temperature continued to range between 101 and 102 never below 101 degrees. He then began to vomit bright red blood and his stools became tarry black. After these hemorrhages the temperature dropped to 98, but soon went back to 102. At this time Dr. Assey sent a specimen of blood for a Widal, suspecting that this was a case of typhoid fever. Widal was negative, Wassermann four plus, and the blood was positive for undulant fever in dilutions up to 1 to 400.

Diagnosis of Malta fever, gastric ulcer, and syphilis was made. Patient remained ill for about two more weeks and finally recovered.

Case 8, reported by Dr. E. L. Horger, Medical Director, State Hospital, Columbia.

Race—Negro.

Sex—Female.

Age—21.

Address—Columbia, S. C.

Anamnesis Obtained From Patient March 5, 1929

Family History:

Father and mother living—both are enjoying good health.

"They have been separated since I was a small child." One brother living and well. None dead. No sisters living—two sisters dead. Died when they were quite young.

Constitutional Disorders: No history of tuberculosis, cancer, etc., occurring in the family.

Mental Diseases: No history of mental disorders or nervousness.

Drugs and Alcoholics: No history of drug or alcoholic habitues.

Past History:

She states that she was born September 21, 1908, in Orangeburg County. When a small child the family moved to Columbia and have lived here ever since.

School history: Started to school when about 7 years of age, quit in 1924. She was about 17 years old when she left school. She states that she was in the 10th grade.

Occupation: Since leaving school she has been cooking and washing. July 25, 1927, she started working as attendant at the State Hospital and has been there ever since.

Religion: Member of the Methodist church.

Social Condition: Single. Never married. Has one child living, four years of age— in good health. No history of her having had any miscarriages.

Menses: Started when a young girl—regular and gives no trouble.

Diseases of childhood: Gives history of having had mumps and whooping cough when a child. No other illness.

Serious Illness: "I have never had a serious illness in my life." She denies having had typhoid fever, pneumonia, rheumatis, scarlet fever, small pox, chicken pox. States, "My health has always been good.

Epilepsy: No history of fits, spasms or peculiar spells of any kind.

Operation: April 2, 1928, appendectomy was performed. She stood the operation well and apparently made an uneventful recovery.

History of Illness:

"I have always enjoyed good health. Never had a serious illness in my life until I took sick before Christmas. My usual weight was about 127 pounds. On the 15th of August I went on my vacation to Raleigh, N. C., to visit a friend and remained there until I returned home on August 28th, and started working again as an attendant on August 29th, and worked until October 21st. Several days before I quit work I didn't feel well. Suffered with headache, pain in the back of neck and back. I stayed at home Monday, and Tuesday I came to the hospital which was October 23, and went to bed sick. I did not feel well for about ten days before going to bed. I suffered with headache, my eyes ached, and I had pains in my back which extended up to my neck. My appetite

was not good. I was nervous, restless at night, and did not sleep well. Part of the time when I was sick I could not remember what happened. On December 1st, I was allowed to sit up a little, continued to improve and on December 15th, I went home, resting for about 15 days, during which time I improved, and I returned to work on December 31st, feeling well. Since my return to work I have not lost a day, been feeling well except several weeks ago I suffered several days with headache, and my eyes felt weak and painful. This only lasted a few days."

How are you feeling now? "I feel good—have gained in weight. The other day I weighed about 135 pounds."

Course of Illness:

Duration, October 30, 1928 to December 16, 1928. Total duration of time in bed, 1 month and 16 days.

Physical Summary:

Negative findings except at the beginning of her illness she had rhinitis, slight cough and was somewhat undernourished.

Temperature:

First week it was a gradual rise, reaching 1052/5 by mouth. Second week—temperature ranged from 101 to 104. On the 15th day, temperature went below normal. From this date on, her temperature resembled a septic infection, ranging from normal and below normal, to 1034/5. Pulse and respiration was in proportion to the temperature except on the 15th day, when there was a disturbance of the heart with an increased pulse rate which responded to cardiac stimulants. During the illness there was very little sweating.

Blood Examinations

There was a marked leukopenia with an increase in the lymphocytes and a corresponding reduction in the polymorphonuclears.

Wassermann and Kahn—Negative.

Malaria—negative throughout the illness.

Widal—negative, after repeating the test.

Spinal Fluid:

Examined No. 17, 1928.

Wassermann—Negative.

Globulin—Negative.

Sugar—Negative.

Pleocytosis—No cells were found.

Urinalyses:

No abnormal fiindings.

On December 3, 1928—Brucella abortus, positive, 1:100 and 1:200.

On December 10, 1928—Brucella abortus, positive in dilution 1:200. Reaction sharp. Slight agglutination in dilution 1-4.

Symptoms

The illness was characterized by continuous fever with a deafness, explained by the toxic condition involving the eighth nerve. She developed rather marked mental symptoms, especially periods of confusion and delirium which came on early in the disease and lasted about four weeks. At night she was restless and didn't sleep well. Headache and neuralgic pains, especially of the lower extremities were present.

Comments on the Etiology

As to the source of infection this patient took her meals at the hospital and at times was eating at home. She was also away on her vacation just prior to her illness. It was impossible to determine definitely the source of infection. She drank milk daily.

Case 9. Reported by Dr. G. R. Westrope, Conway.

A negro gril about twenty-one, the doctors cook. She worked irregularly for several weeks saying she was tired. She seemed well from appearances. In October, 1928 she began to have fever. The doctor visited her and found her in bed, perspiring profusely, temperature 102, pulse 120. The physical examination was negative. She had been chilly, not a definite chill however. Blood smears *postive for malaria. Got some better on quinine.* Later same condition returned, fever, etc. on November 5, Widal, State Laboratory reported negative, Wassermann four plus and postive for Undulant fever. The doctor promptly went to Columbia to see the Director of the State Laboratory about it. She was given Neosalvarsan and other anti-syphilitic treatment. Later blood more postive *for Undulant fever.* The case fell into other hands for some months. Upon receipt of my letter the *doctor went to see her,* found her walking around the yard, stated she felt well, had a temperature *of* 104.3/5, coughing. *The doctor found T. B.* She came of a tuberculous family and Dr.

Westrope's opinion was that the Undulant Fever invited the tuberculous infection.

Under date of March 13 following an inquiry in regard to two positive undulant fever reports, Dr. J. H. Gibbes of Columbia wrote that for several weeks he had been having agglutination tests for undulant fever done on all of the patients that he examined and later would make a report on the result. The two cases had no fever whatever which brings up an interesting and very important question as to why such reports are found occasionally all over the world. Many observers have noted that the blood may be positive from a few months to ten years and that the patient may never have had a definite history of undulant fever. This, however, we will not discuss now.

Summary

1. The pathology is obscure—the paucity of human material being so evident.
2. The disease will tax the diagnostic acumen of the ablest clinician.
3. It is an important public health problem
4. The treatment is symptomatic.

DISCUSSION

Dr. W. K. Lewis, State Veterinarian, Columbia, S. C.: Generally speaking, the premature expulsion of the ovum before viability occurs is referred to as an abortion and may be produced by various diseases of the mother, the fetus, its membranes, traumatism, or influences of various natures. The term we wish to discuss, however, is one that according to latest terminology is referred to as "infectious abortion" and includes those cases which occur in otherwise healthy mothers as a result of external infection producing inflammatory lesions of the uterine mucous membrane, of the fetal membranes and the fetus, and is produced by a specific organism—Bang's abortion bacillus or Brucella Abortus. While this disease occurs in cattle, horses, sheep, swine and other mammalia, yet we shall confine this discussion to the condition as it is found in cattle, for it is now generally accepted that the infection may be transmitted to the human through the medium of milk.

History. For many years investigators and research workers considered the disease to be of an infectious or contagious nature and the correctness of this view was established as early as 1876 by Franck. However, it was not until 1896 that the specific organism was discovered by Bang. His results were confirmed later by Theobald Smith, Schroeder, Cotton, Mohler and others, also the modes of infection were established and likewise methods were developed for diagnosis.

Pathogenesis. Natural infection with the abortion bacillus occurs in the great majority of cases through the digestive tract, however, may be produced experimentally by artificial infection. The organism possesses special predilection for embryonic tissues of the fetal and maternal placenta as well as of the fetus, the udder and corresponding lymph glands.. They may remain dormant there for a long time or multiply slowly, however, they are not found in other organs—nonpregnant uteri are not suitable for their propagation. If on the other hand, they enter the wall of the mucous membrane of the pregnant uterus following a natural or artificial infection they commence to multiply principally in the epithelia of the embryonic chorion tufts and then spread between the chorion and uterine mucous membrane. As a result the tufts or cotyledons undergo a fatty degeneration followed by necrosis which gradually loosen their connection with the maternal placenta cells and finally in most instances an expulsion of the fetus and its membranes occurs.

Following abortion the bacilli are eliminated with the normal discharges which may be usually demonstrated for a period of three weeks. In one instance, however, they were found for fifty-one days by Schroeder and MacFadyean.

On the other hand the organisms continue to remain in the functioning udder and may be conveyed from this location through the lymph or blood stream into the developing membranes in the event of a new impregnation.

Abortion bacilli were first found in market milk by Schroeder, Cotton and Mohler of the U. S. Bureau of Animal Industry and their investigation showed that infected cows eliminate bacilli with their milk as they found them in 12 to 14½ samples of the market milk in Washington. Evans in Chicago found the abortion bacilli in 30½ of examined samples and as high as 50,000 organisms per cc.

The bacilli may appear in the milk several months before abortion and remain in the same for two to four months and in one exceptional case was reported as late as seven years by Schroeder. The organisms may also be present in the milk of cows which have been aborted.. At the same time, the milk has a normal appearance and the tissue of the udder fails to disclose any abnormal conditions.

Anatomical Changes. Briefly, the placenta shows a fibrinous purulent exudate on the cotyledons with a subchorial edema and accompanying hemorrhagic areas. In the fetus there is a marked bloody serous infiltration of the subcutaneous and intra muscular connective tissues also

a hemorrhagic inflammation of the gastro-intestinal canal and internal organs.

Infection. In artificial infection experiments the incubation period varied between 33 and 230 days. In natural infection abortions occurred in newly purchased cows introduced into infected herds in from 70 to 128 days. It has been found however, that if infective material is fed only once agglutinins may appear in the blood after a period of one to five months, while if it is fed regularly two or three times a week, the agglutinins appear more quickly, in some instances within two weeks of the first infection.

Cows are most likely to abort in the fifth or sixth month of pregnancy, however, animals which are pregnant for the first time as a rule abort at an earlier period of gestation than do older ones or those which have previously aborted.

Diagnosis. The diagnosis of infectious abortion may be substantiated by the above mentioned anatomical changes of the fetal membranes and fetus, as well as by the microscopical demonstration of the abortion bacillus. The serological tests, agglutination or complement fixation methods, are employed for detecting the presence of the infection in herds. Both methods of testing give corresponding results and for practical purposes the agglutination test owing to its simplicity is the method commonly used. .

Comment

As to the prevalence of infectious abortion in cattle in the State of South Carolina, we have no definite figures. However, we do know that it does exist to a greater or less extent in some of the dairying and breeding herds.

Just another word, if I may. In my discussion I spoke especially of cattle, but we should not forget that the infection may be contracted from swine. It has been found in various parts of the United States and of Europe, and it has been shown that fifty per cent. of the strains studied are of the porcine type. We do not want to indict our foster mother, the cow, entirely.

Dr. H. M. Smith, Director State Board of Health Laboratory, Columbia, S. C.: The naming of bacteria is still a rather haphazard proposition. Some bacteria bear the name of their host, some the name of their discoverer, some the name of the disease they cause. The name of the germ of undulant fever bears about all the traffic allows, **Brucella melitensis** variety abortus, sometimes still farther extended to the designation of the particular strain. Also, this germ is indifferent as to how it looks under the microscope. You can't tell whether it is a coccus or a bacillus. This difficulty is side-stepped by christening it **Brucella** after Bruce, its discoverer. The Brucella doesn't often kill. To kill the body that feeds it would not be good business,—not biologic adaptation. And an excellent adapter it is, for it often hangs on for years in the body of its host.

Some of us seem to be naturally immune to undulant fever or to have acquired an immunity to it without having had any noticeable symptoms of the disease, especially when children, our blood giving a positive reaction to the **Brucella.** Those of us who are reactors may have been drinking infected cow's milk all our lives, more or less, and in consequence a little thing like **Brucella melitensis** var. **abortus** holds no terrors for us.

On account of the wide-spread occurrence of Br. abortus infection (contagious abortion) in cattle in South Carolina, the presence of the living organisms in the raw milk of infected cows, and the increasing number of cases of undulant fever reported from practically every state in the Union, the State Board of Health Laboratory last fall began doing this agglutination test in all negative **whole blood** or **serum** specimens sent to the Laboratory for the typhoid reaction. **Dried blood** specimens are unsuitable. Physicians in the State have as yet made very few requests for the test and most of the positives so far found have been only "pick-ups." The test is just a Widal test, cultures of **Br. abortus** being used as theantigen instead of the typhoid bacilli for agglutination by the serum. We use the killed cultures, killing them by heat, on account of the very serious danger of laboratory infection from handling the live germs too promiscously. The cultures that we use in the test were obtained from Dr. Lewis' Laboratory and are the mixture of two strains of **Br. abortus** that he finds give sharp reactions with the infected cows in South Carolina. The test is done macroscopically and ia requires from 24 to 48 hours for completion.

Agglutination by serums in dilutions of 1 to 100 or higher is regarded as diagnostic of **Br. abortus** infection or of immunity to the disease. This laboratory standard, though subject to error, must yet be regarded as more reliable than reports of undulant fever on the basis of clinical evidence only. However, I do not know which is the worse of two great nuisances, the clinician whose opinions are infallible or the serologist whose tests are infalliable. Final diagnosis should be made only when clinical and laboratory findings agree. The reaction shows up about the 5th day or later, increases during the course of the disease, and decreases following convalescence, often finally disappearing. During the last six months we have had only 187 negative whole blood Widal specimens suitable for the **Br. abortus** test, 33, or 17.6%, being found postive scattered throughout the State, from Dan to Bersheba. The finding of 33 positives does not necessarily mean 33 cases of undulant fever. Some may be reactions of immunity only, some may possible be technical errors. During the same

period we examined 1039 specimens for typhoid and paratyphoid reactions, finding 197, or 19.1%, positive. We have had only one opportunity of making blood cultures directly from the patient, Dr. Ernest Cooper's case at the State Sanatorium last year, Br. abortus being isolated in pure culture.

Dr. Hardy of Iowa who is making a nation-wide investigation of the distribution of recognized undulant fever via the questionnaire rout informed me recently that the number of cases in the U. S. before 1925 were 116; in 1925, 22; in 1926, 34; in 1927, 194; in 1928, 560. This indicates not necessarily an increased rate,—perhaps just better diagnosis.

I am quite sure that there are a lot of more or less obscure fever cases in the State, improperly labeled typhoid, malaria, influenza, tuberculosis, rheumatism, and what have you. It is strongly advised that undulant fever be at least suspected in these cases and that 3 or 4 cubic centimeters of whole blood be sent to the State Laboratory for the agglutination test. This may help in the diagnosis, if not in the treatment. Most cases occur probably in the small towns, villages, and the country and will be seen by the general practitioner. He can be of great aid in clearing up the situation by increased use of his State Laboratory facilities.

The subject of undulant fever is of ever growing importance, and its presentation by Dr. Hines today has been very able and instructive. Furthermore, like the present day woman's dress, it was just long enough to cover the subject and short enough to be attractive.

Dr. Ernest Cooper, Director State Sanatorium —State Park S. C.: I shall not attempt to discuss Dr. Hines' paper in detail, but I think it may be of interest to report the case of which mention has been made. The patient was a girl nine years of age who had been in the sanatorium for several months. Prior to coming to us, and while in another institution, she had a continued fever of unknown orgin. During the meeting of the state medical association last year I was notified there was a case of typhoid fever in the children's department. The patient was transferred to the adult department for observation. On study of the disease, the characteristic temperature curve, and the appearance of the patient, and the white cell count of 12,200, I was soon convinced it was not typhoid fever, although the blood test showed a positive paratyphoid reaction. With the temperature running 103, 104, or sometimes higher, the patient did not seem sick; she was bright and lively, alert, and did not show the stupor and anorexia that characterize typhoid fever with a temperature of that height. Other symptoms and signs suggested undulant fever—e.g., enlarged spleen, the peculiar sweats, chills, and constipation. I conferred with Dr. H. M. Smith, but he was not prepared to do the blood test for undulant fever, so a specimen of the patient's blood was sent to the Hygienic Laboratory at Washington. This was reported positive in dilution 1:320 for Brucella melitensis, variety abortus. The fever continued for ninety days, when it became practically normal and remained so for several days. I laughingly remarked to an intern that if there were no relapse she was cured. The next day the fever rose again and continued for ninety days; a total of one hundred and eighty days. The treatment was entirely symptomatic; we gave enemas for constipation and forced water and food, so that, notwithstanding the long attack of fever, she did not lose weight.

Dr. H. M. Smith made cultures from her blood and urine. The former yielded an organism with the cultural and morphological characteristics of Brucella abortus.

Dr. B. Kater McInnes, Charleston, S. C.: At the last meeting of the American Public Health Association held in Chicago I do not think there was any disease on which more discussion was brought forth from a variety of states by a variety of people. I personally feel that preventive measures in the rural districts would probably be more essential than in the larger cities, because we know in the larger cities (or in a great many of them) pasteurization is coming into vogue; and pasteurization seems to destroy the infection. But in the smaller places, where little attention is paid to sanitation and milk is produced under the most insanitary conditions, I think there is danger of prevalence of this disease. After the meeting in Chicago the dairy association passed a resolution providing that all certified-milk herds should be free of abortus as well as tuberculosis.

One thing that would probably help the person who has cows, especially in rural sanitation, is holding out the cows that have an abortion, whether they abort from one cause or another, until all the discharges clear up.

We had one case in Charleston we thought was a case of Malta fever, a boy on a dairy farm. After he stayed in bed for about three months we decided it was not that, but for a while it certainly looked like a case of undulant fever. He had the typical fever, and he had been drinking milk.

It is probably in the rural districts that you are going to find most of it.

Dr. T. N. Dulin, Clover: I think from an economic standpoint and from the standpoint of health this is one of the most important subjects that has been brought before the medical society since I have been attending it. If we consider what this means from the standpoint of

health, that we might have undulant fever all over the United States or all over the world, for that matter; if we consider what amount of money that might take out of the pockets of the people, it is almost incredible. It seems to me that we ought to do all in our power to curb it, and I have not the slightest doubt that there are many more cases than we suspect.

Dr. Hines, closing the discussion: I have nothing more to add. I do not know much about the subject, but I am happy if I have pointed the way. I am especially grateful to Dr. Lewis for coming down here and for his efforts, and I also thank the other gentlemen.

Last night I had a report from Dr. Abel, of Chester, of a case in the child of a brother doctor. I had that in my pocket this morning but did not refer to it.

BUREAU OF HEALTH EDUCATION

By Chas. O'H. Laughinghouse, Secretary and State Health Officer, Raleigh, North Carolina

Acting on the conviction that "no one can be expected to worship Christ who has never heard of Christ," the State Board of Health undertook some years ago to organize a Bureau of Health Education. This Bureau has functioned long enough to demonstrate its usefulness. It has so deported itself as to earn the sympathy and interest of the public press in the State. Its articles are accepted by the various papers and there is never a day but that something in the way of health education is not spread all over the State through the press. The bureau of Health Education has enlightened the people with relation to the State's health laws and the necessity for enforcing them in such a way as to make the people respect and obey such laws of sanitation and health as the State has on its statute books. It has made the people come to see the value of reporting births, deaths and such diseases as the State Board of Health has made reportable. In addition to this, the bureau of Health Education sends speakers to various parts of the State and to the schools to discuss with the people the different health subjects which are necessary to the prevention of disease and the prolongation of life. It publishes every month a health bulletin which comes to the address of the people in the State for the asking. It gives special information concerning particular health topics that individuals, organizations and communities may become interested in. It gives out general information by letter and through the press concerning disease prevention and healthly living.

Its educational pamphlets, publications and papers are disseminated through the State for the asking and they have done much to bring about a more emphatic health conscience in the State than existed before the bureau began to function. It carries on an advisory correspondence with relation to health subjects and there is constantly in operation throughout the rural communities in the State an ambulatory moving picture show that teaches and treats the question of health in such a way as to interest both parents and children in the great subject of health conservation. It also carries on a tonsil clinic conceived and operated for the purpose of health education. It furnishes all types of health education pamphlets to the various county health departments within the State and comes to the assistance of these departments whenever assistance is asked for.

The public schools, both municipal and rural, disseminate its pamphlets on communicable disease, personal hygiene and healthly living. Through its department of Maternal and Infant conservation it mails letters to pregnant women and to the mothers of children, giving them such information as is conducive to their health, comfort and safety.

The State of North Carolina has come to appreciate this particular activity of the Board of Health so profoundly that it has in the past and we believe in the future it will appropriate a sufficient sum of money to continue its activities, feeling that the appropriation allocated to Health Education brings most satisfactory results.

SOCIETY REPORTS

PROGRAM MEETING OF THE PEE DEE MEDICAL ASSOCIATION HELD AT FLORENCE, S. C., TUESDAY, NOVEMBER 12, 1929.

10:00 A. M. Meeting called to order by the President, Dr. Douglas Jennings, Bennettsville, S. C.

Reading of Minutes—Dr. S. C. Henslee, Sec'y., Dillon, S. C.

Address by Dr. Charles R. May, Bennettsville, S. C., President of the South Carolina Medical Association.

Address by Dr. M. R. Mobley, Florence, S. C., Councilor Sixth District, South Carolina Medical Association.

Papers

1. Cases Presenting Problems in Tuberculosis Theraphy, Dr. W. A. Smith, Charleston.
2. Newer Aspects of Infant Feeding, Dr. J. H. Price, Florence.
3. The Management of Normal Obstetrics, Dr L. R. Kirkpatrick, Bennettsville.
4. Syphilis of the Nervous System, Dr. O. B. Chamberlain, Charleston.
5. The Modern Treatment of Syphilis, Dr. L. J. Ravenel, Florence.
6. Pellagra, Dr. R. L. Gardner, Chesterfield.
7. The Management of Diabetes, Dr. W. R. Mead, Florence.
8. Diphtheria Prophylaxis with Toxoid or Antitoxin, Dr. Paul E. Sasser, Conway.

PROGRAM MEETING OF THE OCONEE COUNTY MEDICAL SOCIETY HELD AT WESTMINSTER, TUESDAY, NOVEMBER 12, 1929.

Order of Business

Call to order.

Reading of Minutes.

Report by Committee on Hospital situation .

Scientific Program.

Practical Points in the Management of Obstetrics in the Home. By Dr. W. C. Hearin, Greenville, S. C.

General discussion and questions.

Anomalies of the Esophagus in the New born. Report of a Case with Autopsy. By. Drs. W. C. Marett and E. A. Hines, Jr., Seneca, S. C.

General discussion.

Miscellaneous Business.

Adjournment.

Officers

Dr. T. G. Hall, Westminster, S. C. ____ President
Dr. E. A. Hines, Seneca, S. C. ______ Sec.-Treas.

PROGRAM OF THE FIFTH DISTRICT MEDICAL ASSOCIATION MEETING HELD AT ROCK HILL, S. C., OCTOBER 31, 1929.

Program—

(1) Invocation, Dr. A. S. Rogers, Rock Hill, S. C.

(2) Welcome, Dr. J. B. Johnson, Mayor, Rock Hill, S. C.

(3) "Remarks," Dr. J. E. Massey, Rock Hill, S. C.

(4) "Sinus Disease, It's Diagnosis and Treatment," Dr. H. C. Shirley, Charlotte, N. C.

(5) "Tonsils and the Young Adult," Dr. Norma P. Dunning, Winthrop College, Rock Hill, S. C.

(6) Paper (subject unannounced), Dr. J. W. Corbett, Camden, S. C.

THE UROLOGICAL ASSOCIATION OF SOUTH CAROLINA HELD MEETING AT SUMTER, S. C., OCTOBER 29, 1929, 6:30 P. M.

Programme—

Banquet.

Presidential Address, Dr. Jas. J. Ravenel, Charleston, S. C.

"An Interesting Experience with Bladder Stones," Dr. W. S. Judy, St. George, S. C.

"The Symptom, 'Frequency of Urination' and the Value of the Phenol-sulphonephthalein Test in Kidney Diseases." By invited guest, Dr. A. J. Crowell, Charlotte, N. C.

"Ureterocele," Dr. W. B. Lyles, Spartanburg, S. C.

Report of Clinical Cases.

Hugh E. Wyman, M. D.,
Secretary-Treasurer.

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COMMENTS AND SUGGESTIONS CULLED FROM SPEECHES AND REPORTS OF DELEGATES AT THE SEVENTH ANNUAL SESSION OF THE WOMEN'S AUXILIARY OF THE AMERICAN MEDICAL ASSOCIATION

The Auxiliary has a large and rapidly increasing membership. Every doctor's wife should consider it a privilege to become a member.

Every member of the Auxiliary should give helpful, wise and sympathetic cooperation to her doctor husband.

The State Auxiliaries should take care that their activities do not conflict with the National Policy.

The State Auxiliaries should not affiliate with other organizations. They should cooperate but not affiliate.

The work of the Auxiliary should be distinctive and pertain to the practice of medicine.

Differentiate between charity work and the work pertaining to the prevention of disease.

The Auxiliary should be interested in good housing conditions and proper sanitation.

"The Study of Your City, County and State Health Condition" is suggested as a good auxiliary program.

Auxiliaries should have open meetings and invite laymen as guests. They should also have health programs.

Superstition is an evidence of ignorance, and superstition and prejudice are hindering greatly the health education of today.

Give the youth of today proper health education. Early impressions endure.

Auxiliaries should take an active interest in all health laws.

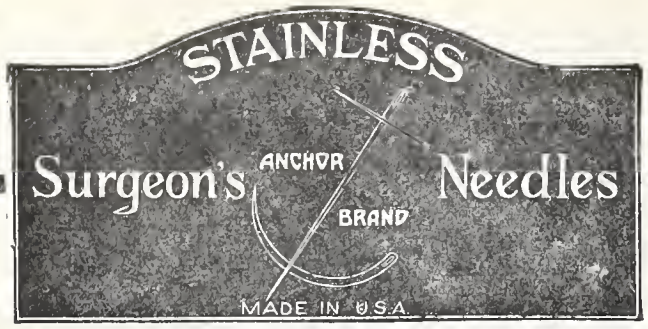
Know your legislative bills and remember every question has two sides; know both sides before you make your decision to work for a bill.

Why do so many fallacious ideas on medicine go unchallenged?

Did you ever stop to think that the economic phase of a doctor's practice is as important as its scientific side?

Some education on the economic side of medicine would not be amiss.

Among the eminent speakers who addressed the Auxiliary Convention were the following: Mrs. Allen H. Bunce of Atlanta, Ga., president of the Auxiliary to the American Medical Association, who presided at all meetings in a charming and gracious manner; Mrs. Charles W. Richardson of Washington, D. C. whose husband is a trustee of the American Medical Association; Dr. M. L. Harris, president-elect of the American Medical Association; Mrs. Morris Fishbein of Chicago, chairman of Revision and By-laws; Mrs. George H. Hoxie of Kansas City, president-elect of the Auxiliary American Medical Association; and Dr. E. H. Cary of Dallas, Texas, chairman of the Advisory Committee of the American Medical Association.



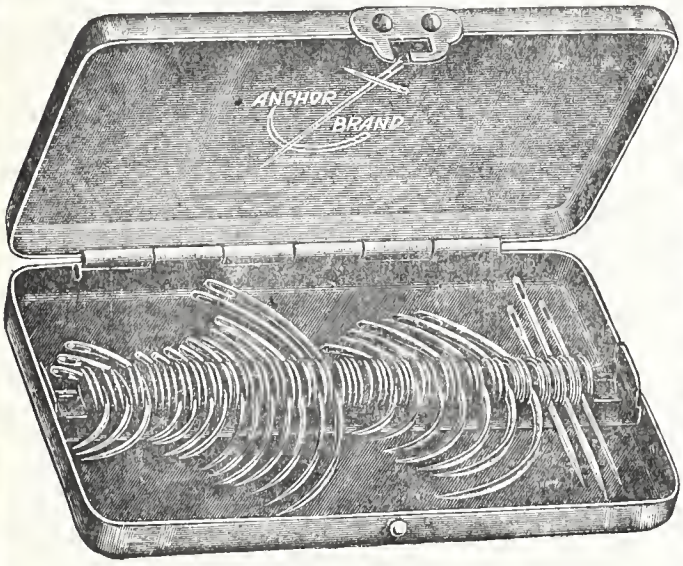
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OF THE

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EDITORIAL

WORKMAN'S COMPENSATION BILL BEFORE LEGISLATURE

One of the most far-reaching bills for the benefit of the public and the medical profession appears to have the right of way before the present Legislature. Workman's Compensation Laws have been enacted, since the first one in Germany in 1884, in fifty countries and about forty-four States. South Carolina is one of the last States to consider such legislation. Our sister State, North Carolina, enacted such a law in 1929 and it appears to be working well. The bill before our Legislature is based on that law. As the measure moves along it should have the serious consideration of every doctor in the State. Our Legislative Committee of which Dr. T. A. Pitts of Columbia is Chairman will need the support of the medical profession most heartily. We urge that the medical profession keep in close touch with Dr. Pitts and respond promptly to every call of his committee.

MARLBORO HAS GREAT MEETING

The annual New Year's meeting of the Marlboro County Medical Society held at Bennettsville early in January proved to be a spectacular success. About one hundred visitors were present, many from other States. The papers read were of a very high order as shown by the enthusiastic discussion following each one. The banquet added a peculiar zest to the occasion. The good fellowship of these annual meetings is self evident the moment one arrives. It grows in intensity until the midnight hour approaches. This is the home town and county of our distinguished President, Dr. C. R. May. Every doctor in the Marlboro County Society meets ever other doctor at these meetings on the level. The members vie with the officers in making each meeting a bigger success than the one that preceded it.

THE CHARLESTON SOCIETY ONE HUNDRED AND FORTY YEARS OLD

The Medical Society of South Carolina (Charleston County) held its one hundred and fortieth anniversary meeting in December. Few events in the medical annals of our State have been more significant or more enjoyable. About one hundred and fifty medical men were present to participate in the celebration of the event. The Charleston Society is the sixth oldest living Society in the United States. Through this long history the organization has sustained a record of unsurpassed interest in the promotion of the highest ideals of scientific medicine. The effect of such activities has left its impress not only upon the State but upon the world. The city of Charlestion early became an important medical education center. It continues to uphold its reputation as such. Most of the major advances of organized medicine in South Carolina have had their inspiration at the instance of the Charleston profession. On the above occasion there were numerous distinguished visitors. Dr. C. R. May, President of the State Medical Association, was the guest of honor.

PAYMENT OF DUES

The fiscal year closes on December 31, and the payment of dues should begin promptly as the New Year moves along. Under our system these dues are paid to the County Officers and it will help tremendously if the members do not wait for repeated urging along this line. The membership responded well in 1929 and we do not anticipate any trouble in 1930.

COLUMBIA MEDICAL SACIETY BEGINS THE NEW YEAR WITH GREAT PROMISE

Under the inspiring leadership of Dr. J. H. Gibbes the new President the Columbia Medical Society held the first meeting of the year on January 13. This Society reported a membership of 104, which leads the State. The President announced some great plans for the entire year's work. In the main these plans include pathological conferences and speakers of unquestioned ability from various parts of the country as well as outstanding papers by their own members. This will mean a continuing post graduate course for the fortunate members of the Columbia Medical Society. Such an ambitious program will surely stimulate scientific medicine not only in the local society but throughout the State.

THE NEW HEALTH DEPARTMENT FOR STATE BOARD OF HEALTH

Elsewhere in this issue appears a communication from the Chairman of the Committee on Health and Public Instruction in regard to the bill before the present Legislature providing for a most needed Publicity Department within the State Board of Health. The President's page is devoted to information on the bill. We are informed that more than half the States in the Union have provided for such departments and without exception they have worked well and added tremendously to the health education of the people. There is an urgent need for this specific department with its duties clearly defined so that there will be a supreme authority from a publicity standpoint to which the whole State may look with confidence. Such a department properly supervised should cooperate with all the existing health agencies to one supreme end that all the people have an opportunity to learn of the ways and means for enjoying optimum health and the freedom from communicable diseases such knowledge should lead to. Excellent work is being done along many of these lines now but there is needed a correlating agency and of course a much larger press service. We urge that this bill be given close consideration by every doctor in the State.

FLORENCE MEETING TO BE HELD MAY 6, 7, 8, 1930. TITLES OF PAPERS WANTED

Arrangements for the Florence meeting have been under way for a long time and the Scientific Committee wishes now to call attention to the matter of submitting titles of papers to be read. The Committee desires to have a number of papers from our best general practitioners on subjects that should be of special inter-

est to this large section of our membership. These titles may be sent to the Chariman of the Committee, Dr. Hugh Smith, of Greenville, or to the Secretary of the Association. The program will be limited to about twenty-five papers. The subject of tuberculosis will be stressed this year and papers on this subject will be presented on invitation of the Scientific Committee. All the rest of the program will be made up chiefly of volunteer papers.

ORIGINAL ARTICLES

CONGENITAL MALFORMATION OF THE ESOPHAGUS WITH REPORT OF A CASE WITH TRACHEO-ESOPHAGEAL FISTULA.*

By W. C. Marett, M.D.,
and
E. A. Hines, Jr., M.D.,
Seneca, S. C.

Althought esophageal anomalies are relatively rare, we find a number of such cases reported in the literature. Hirsch had collected 146 authentic cases of congenital atresia of the esophagus up to 1921, and Holderman, in 1927, after a careful search of the literature brought the total number of reported cases up to 218. This case is reported in order to show that the condition is frequent enough to be occasionally met with in a general practice, and consequently should be considered in any case wherein a newborn infant is unable to retain its food.

Congenital anomalies of the esophagus may be conveniently divided into the following classes:

1. Total absence of the esophagus.
2. Congenital atresia of the esophagus with or without tracheo-esophageal communication.
3. Simple atresias with membrane or valve-like formations.
4. Diverticulae of the esophagus.
5. Double esophagus.

Congenital absence of the esophagus is very rare. Knerr reported a case and Parish and Sanders each reported a case in which the lower part of the esophagus was only a fibrous cord. Atresia with esophago-tracheal fistula is the most common and is the class in which this case belongs. In 85 cases of atresia collected by Cautley, 70% had tracheo-esophageal communication. Beatty reported 50 cases of simple stenosis of which many recovered or improved after treatment.

Etiology

The cause of atresia of the esophagus with tracheo-esophageal communication is, of course, to be found in some aberration from the normal during the embryological development of the foetus. The exact nature of the change is uncertain. Elterich states that "the best theory of the etiology is based on malformation of the anlage of esophagus and trachea." Griffform believes that the lateral folds, from which the air passages develop, unite at one point with the posterior wall of the esophagus causing atresia; while below they are unable to unite in the normal manner in the midline thus permitting a fistulous communication to remain. Plass adds, "The condition must exist before the embryo has attained the length of 4 mm., for at this time the trachea and lungs are normally separated from the esophagus."

Symptoms and Diagnosis

To one familiar with the condition, the diagnosis is easy. It is possible that a number of infants who die in the first week of life because of inability to retain food, and who are incorrectly reported as "vomiting everything," belong under this diagnosis.

The symptoms are uniform for all cases. The infant soon after it is born will be found to have an unusual amount of mucus in its lungs, and may require considerable efforts at resuscitation. Otherwise, it will usually appear normal, although other congenital deformities may be present. Plass found atresia of the anus in 24 of 93 cases.

The most striking and constant symptom is the inability of the infant to retain its food. It will be noticed that shortly after nursing, the

*Read before the Oconee County Medical Society, Nov. 12, 1929.



Diagramatic drawing of necropsy specimen showing probe passed through opening in trachea into the stomach

baby will draw away from the breast; turn cyanotic and begin spitting up the small amount of milk it has swallowed. The same process will be repeated at each attempt at nursing. If a soft catheter is passed into the gullet, it will meet a very firm obstruction after passing a distance of about 12 cm. from the mouth. As time passes, the patient will rapidly lose weight, will become wizened and, in from five to ten days, will die from lack of food and body fluids. These patients seldom die from suffocation.

An X-ray study may be of some value in the diagnosis as it may be possible in this way to determine more exactly the nature of the obstruction.

Prognosis

All cases steadily progress to a fatal termination.

Treatment

Except for general supportive measures, any treatment which attempts a cure must be surgical. The ideal operation would be one in which the fistula could be closed and the continuity of the esophagus reestablished. We can find no record of this having been attempted. Richter closed the fistula and did gastrostomies in two cases but both died shortly after the operation. Kas and Avery, Litchfield, Simpson and others have performed gastrostomies on patients with this anomaly but all died within twenty-four hours after the operation. Jejunostomy has been performed a number of times with no better results. The reason for these failures is evident as any food injected into the stomach or even the jejunum may find its way into the air passages through the fistula in the esophagus.

After an unsuccessful attempt to make an opening through the obstruction with a sound, we unknowingly followed the advice of Hoffman who in 1897 said, "Let them die in peace."

The futility of giving the patient food or fluid by mouth is evident. Fluid should be given by proctoclysis, hypodermoclysis or by intraperitoneal injection. This is especially essential as a preliminary to operation.

If the presence of an esophageal fistula is not very evident and an esophagoscopy cannot be done to eliminate the possibility of an obstruct-

ing membrane, it is well to try to pass a sound through the obstruction. If a membrane is causing the obstruction, the patient can be relieved immediately. If the sound should be passed through the wall of the esophagus into the mediastinum, as was done in this case, no great damage will be done as the patient would have died shortly anyway.

Summary

1. Esophageal anomalies with tracheo-esophageal fistulas are not extremely rare.
2. The symptoms and physical findings are uniform and the diagnosis evident.
3. At present, all are fatal.

Case Report

The infant's mother was a well developed multipara, age 22. She was delivered by a midwife, September 11, 1929. Delivery was normal. Shortly after the baby was born it began having considerable difficulty in breathing. One of us (E.A.H., Jr.) was called and found the baby apparently normal but cyanotic and breathing with difficulty. There seemed to be much fluid in the lungs. The patient was suspended by its feet and slapped on its back several times. As this did not help it very much, a small catheter was passed into the larynx and the slapping process repeated. About half a teacup of mucus and serous fluid passed from the lungs and the baby began breathing normally. About 48 hours later, W.C.M. was called to see the baby. The parents stated that since it was born the baby had vomited and turned blue at every attempt to nurse the breast. On a trial nursing, it nursed vigorously for a few seconds and then cried out sharply, turned away from the breast and spit up all the milk it had taken. Until the milk was ejected, the infant was markedly cyanotic and seemed to be in great distress. This procedure was repeated at each nursing. The baby seemed normal otherwise.

It soon became evident that there was some obstruction in the esophagus. The cyanosis, however, could not be explained on this basis. We passed a catheter into the esophagus and met with a firm obstruction about 12 cm from the infant's mouth.

The following day, a roentgenogram of the esophagus showed a blind pouch ending at the point where obstruction was met by the catheter. Thinking that possibly this was a membrane, an unsuccessful attempt was made to pass a sound through the obstruction. An intraperitoneal injection of salt solution was done. Further treatment seemed hopeless. The infant rapidly became dehydrated and emaciated, and died on the sixth day.

Necropsy: The neck organs, respiratory organs, esophagus and stomach were removed *en masse* and carefully dissected. The upper end of the esophagus was found to end in a blind pouch just below the thyroid cartilage. The lower end of the esophagus entered the stomach normally. However, about in the mid-portion it ended abruptly and seemed to coalesce with the trachea just below the blind pouch of the upper end. There was no connection at the mid-portion between the upper half and the lower half of the esophagus. The trachea was incised and a small opening noted on the posterior wall about 2 cm. above the bifurcation. A probe inserted through this opening easily passed through the esophagus into the stomach. No other abnormalities were found.

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THE NEWER ASPECTS OF INFANT FEEDING*

By G. C. Brown, M.D., and J. P. Price, M.D., Florence, S. C.

As long as we have babies, the question of infant feeding will always be of paramount interest to the pediatrician and general practitioner, and at times to the obstetrician. To live, to grow, to develop properly, the baby must have correct food. Nature has furnished us with breast milk, of which Oliver Wendel Holmes said, "The two breasts of a woman can produce a baby food far superior to anything concoctable by the two hemispheres of the most learned professor's brain." His statement is true today. But breast feeding must be regulated; it may not be available, which will necessitate other foods; supplementary and accessory foods may be needed; vitamins must be given to insure proper growth and development. These problems must be met by all who deal with the care of babies, and it is with these in view that we have prepared this paper. We are not attempting to present any original work of our own, but rather to bring together, out of the mass of literature on the subject, some of the newer and more helpful advances that have been made recently.

Breast Feeding. The statement that good breast milk is the normal and best food for the baby during the first months of life hardly bears dispute. This is no new conception. Soranus in the first century, writing the first book on record for mothers on the care of infants, stresses this point and made many suggestions which are still useful today, such as, "Breast feeding at irregular intervals or often during the day and especially during the night, may be the cause of sickness in infants."

Every well mother owes it to her baby to nurse it if possible, and Moore and Dennis (1) are expressing the general concensus of opinion in this regard when they affirm that "any mother who is well enough to care for her child is capable of nursing it." The physician attending the mother is of course the one to determine the mother's capabilities. Certain conditions present in the mother immediately contraindicate nursing, such as severe anemia, marked malnutrition, tuberculosis, active syphilis, mammary abscesses. But in the great majority of cases the mother can nurse her baby. F. H. Richardson and others have done much in the past few years to educate the profession and the public to this view.

Some infants should not nurse, such as those with harelip, suspected cerebral injury, and certain cases of prematurity. But these babies still need breast milk.

The first day of the baby's life is a very important one, for the first time it is living within itself. How soon should it be put to the breast? Each case will, of course, be considered by itself, depending upon the condition of the mother following parturition, for she may need a prolonged sleep and rest. Let us consider the average case, however. Speaking for the obstetricians, De Lee (2) Hirst (3), and Williams (4) advocate letting the mother rest for several hours (6-12) and then allowing the babies to nurse for three to four minutes. De Lee then lets the baby nurse every four hours until the

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milk comes, Williams three times a day. Most pediatricians agree with this plan in general. Howland (5) and Dunn (6) advise waiting six hours, nursing every six hours for the first twenty-four, then every four hours. Grulee (7), Wilcox (8), and Kerley (9) wait for from 6-12 hours, then nurse every four hours. Starr (10) adopts the plan of waiting four to eight hours, then nursing every two hours when the mother is awake. Jacobi (11), on the other hand, from his vast experience, was far more conservative and advised waiting twenty-four hours giving the baby water or some indifferent fluid such as weak tea sweetened with saccharin. A report from Germany in the last year seems to bear out Jacobi's plan. Reiprich (12) analyzed a study of 400 babies, 200 of these he placed to the breast from twelve to twenty-four hours after birth. The other 200 he waited form 21-34 hours. He found that those who were made to wait the longer intervals reacted more favorably with regard to weight and general condition and the mother has a far better chance to rest.

There are a few who have suggested that the babies be given a milk formula until the milk comes down in the mother's breast in order to do away with the initial loss in weight But the great majority feel that the breast need the stimulation allowed by sucking and that the immune bodies contained in the colostrum are of great benefit to the babies.

Once breast feeding is established, how often should the baby nurse? All are agreed that a regular shedule should be adopted. Wilson (13) represents the ultra-conservative school in advocating a three hour schedule up to the sixth month, allowing the baby to sleep through the night as soon as it will. Many pediatricians modify this by changing to a four hour schedule after the third month. Howland (5), Grulee (7), and Wilcox (8) advocate a four hour schedule from the very start, finding that the infants do just as well, if not better, than when on a three hour schedule, and that the mothers have their load lightened a great deal. They omit the late night feeding after the first or second month.

How long should the baby be allowed to nurse? Wilson (14) and Richardson (15) are very emphatic in their lectures in stating that a baby cannot take too much and should be left at the breast until satisfied. Howland (5) and C. H. Smith (16) are just as emphatic in stating that over-feeding can cause digestive and nutritional disturbances in babies and advocate eight minutes as a general rule and twelve minutes as a maximum. Personally, we agree with the latter view.

How much will a baby take at a feeding? This is of considerable interest to us not only with breast milk, but also when we shall take up breast feeding. To determine this, the baby must be accurately weighed before and after nursing. By this method, two generally accepted plans of computing this amount have been arrived at: 1. The baby will take two plus his age in months, in ounces. 2. One-half an ounce per pound of body weight. How changeable this amount may be, however, is shown by observations of Gerstley (17). He secured the hearty cooperation of two mothers who weighed their babies before and after nursing over a considerable length of time. He found that an eight pound baby took from 3 to 6½ ounces at a feeding and averaged from 20 to 25 ounces a day. A 10 pound baby varied in one day from 3½ to 9 ounces and averaged 22 to 30 ounces a day. It can easily be seen from this work how fallacious it may be to determine the amount an infant is getting, based on weighing before and after one nursing alone.

When should the baby be weaned? Here again circumstances will alter cases. On the one hand, the mother may find that the milk supply is drying up prematurely. On the other hand, from financial or other reasons, the mother may find it advisable to nurse the baby longer than usual,—it is cheaper to supply breast milk than to procure cow's milk. Let us consider the average care, however. We find differences of opinion among writers. Kerley (9) advises weaning at the ninth month; never later than the twelfth. Wilson (13) likes to use some supplemental feeding, but keeps the baby on breast milk until one year is reached. We feel that Veeder (18) has struck the best note in his terse summary, with which most pediatricians will concur: "3 months are essential, 6 months desirable, 9 months sufficient, 12 months too long."

In a recent article Hoefer and Hardy (19)

present the results of an interesting study in 383 children in the elementary schools. A careful history of the method of the feeding of these children when babies was taken and careful physicial and mental tests made. Their conclusions were: 1. Artificially fed infants were, on the whole, inferior physically and mentally to the breast fed (i. e. in physical traits measured, susceptibility to disease, learning to walk and talk, mental tests). 2. The babies who were breast fed from 4 to 9 months were the superior group mentally. Those breast fed more than 9 months were the poorest mentally.

Fluids. That the baby needs some fluids in addition to his regular nursing, especially during the hot summer months in our South, is a point well recognized, but all too often overlooked by the busy doctor. That a baby shall receive three ounces per pound in total fluids during the 24 hours, as advised by Smith (16), has been a safe and practical plan, we have found. The average baby will take from 2 to 2½ ounces per pound of breast milk in 24 hours, so the amount of water to be given between feedings can easily be calculated.

Artificial Feeding.

In no field of infant welfare has there been as much research and writing in recent years as in the field of artificial feeding. To cover this phase adequately would necessitate a monograph, and we shall merely touch the more important points.

Supplemental feeding. Many pediatricians advise the giving of one bottle early in the first year to teach the baby to suck from the bottle and to relieve part of the strain on the mother. Some begin the first month, others, later. A modified cow's milk or dried milk formula is usually used, in a dilute mixture.

Entire feedings. When the child is removed at the proper age, or has to be taken from the breast earlier, what substitute is to be used? Cow's milk or some preparation made therefrom has been universally adopted in this country. Certain differences between woman's milk and cow's milk are found, however, and must be borne in mind in our usage. The fat content in each is about 4%. In human milk the sugar averages 7% and in cow's milk, 4.75%. On the other hand, the protein in woman's milk is 1.5% as compared with 3.5% in cow's milk. The salt content in woman's milk is around .2% and in cow's milk .7%. As Wilcox (8) points out, the most important difference is in the protein. In woman's milk, two-thirds of the protein is in the form of soluble lact-albumin, whereas in cow's milk six-sevenths is in the form of casein, a type of protein hard to digest and relatively poor in the essential amino-acid, cystin. For this reason mainly, the milk should be diluted for young infants. Further, raw cow's milk as Brennerman (20) points out, is a peculiarly solid food, coagulating in large firm masses in the stomach which increase in size by agglutination and become increasingly hard by contraction. For this reason, he feels that dilute milk is better in young infants than whole milk. Conceded that cow's milk should be diluted, what dilution should we use? Four essential factors must be reckoned with in prescribing the formula, namely, the number of calories that will be needed by the baby, the amount of milk it be used, the additional carbohydrates required, and the amount of water to be added. It has been well established that the average baby requires from 45-50 calories per pound of body weight, each day. Having calculated the total number of calories, how much should be given in the form of milk and how much in added carbohydrates, in which diluted cow's milk is low? Veeder (18), Wilcox (8), and Smith (16) feel that the baby needs from 1½ to 2 ounces of milk per pound of body weight with enough water added to make the entire formula approximately 3 ounces to the pound per day, the maximum for the day's formula, however, not to exceed 35-40 ounces. This will mean that the infant will be getting whole milk about the ninth month. Wilson (13) is more conservative, he use one-half milk and one-half water the first three months, two-thirds milk and one-third water to the sixth month, three-quarters milk and one-quarter water from the sixth to the ninth month, and whole milk from then on. Each pediatrician is a law unto himself with regard to milk dilution but the two plans given above are those which are used extensively throughout the country. Personally we feel that the former method is the preferable one.

Carbohydrates—Since cow's milk has only 4.7% sugar as compared with 7% in woman's milk, and the cow's milk is usually diluted in feeding the small baby, it has been evident that carbohydrate must be added to the formula to secure a balanced food. Some use a percentage scale and make their final formula carry a certain amount of sugar, ranging from 4-10%, depending upon the individaul physician's own ideas. The great majority, however, are content to use an approximate amount, finding that babies can handle such an amount well: Wilcox (8) and Wilson (13) use from ½ to 1½ ounces of carbohydrate in the day's formula, using the smaller amount as the formula more nearly approaches full strength milk. This method seems to us the most practical one for the general practitioner. Those who are in hospitals or who wish to be certain of the exact caloric content, calculate the number of calories present in the milk to be given, and then can easily figure the number of additional calories needed to bring the total food up to a value of 45 calories per pound per day. This is the method we adopt and have found most satisfactory.

What type of carbohydrate should be used? Here we find a diversity of opinion with various workers ardently advocating cane sugar, lactose, dextrose, dextri-maltose, Karo, etc It would appear from all that is written that an average baby will do well on any one of these sugars used intelligently. Personally, we use either cane sugar or dextri-maltose. Of interest along this line is the recent report of Dennet (21). He feels that cows milk and sometimes breast milk does not contain the optimal quantity of vitamin B (the growth vitamin), and that some food should be routinely added which contains this factor. He has been using whole wheat germ sugar (Vitavose) (26) and reports excellent results. He says that from 1 to 3 tablespoonfuls (1/3-1 oz.) added to the day's formula is sufficient. Of special interest to the Southern physician is the fact that Vitavose contains a high anti-pellagra factor.

Should the milk be fed raw, sterilized, or boiled? This is a very important point and will bear discussion. Two factors must be reckoned with as we consider milk and our treatment of it: its nutritional value and its sterility. To take up the question of nutrition first.—Does pasteurization or boiling the milk increase or decrease the food value and digestibility of cow's milk? That changes take place is well known. The mineral salts largely undergo precipitation, the casein is rendered softer and lighter but is rendered less easy of coagulation by digestive fluids, lactalbumin is precipitated, fatty acids are volatilized, and a anti-scorbutic vitamin destroyed. These changes all take place in boiling milk and some are evident in pasteurized milk. How does all this effect the baby? Lewis (22), in a study of 233 cases, states that infants fed on certified (raw) milk made distinctly more progress than those fed on pasteurized milk, especially the group of babies under three months, and that the incidence of rickets was less. Brennerman (20), on the other hand, presents a very carefully worked out study with different conclusions. In attempting to find out why babies on lactic acid milk did so well, he convinced himself that it was the boiling of the milk and not the added lactic acid which was the deciding factor. The boiling renders the coagulated curd far more disgestible and he feels that it is this attenuation of the curd which is of great benefit. The concensus of opinion seems to be with Brennerman in believing that boiling milk does not decrease but rather increases the nutritional value and digestibility of the milk. To be sure, certain vitamins are lost, but they can be easily replaced.

With regard to sterilization, it is an established fact that raw milk handled in the bulk is all too often unsterile through contamination. That the infant mortality throughout the country and more especially in the larger cities, has been decreased markedly in the past few years has been in great part due to the supervision of the milk supply, with laws requiring either certification or pasteurization.

In concluding the discussion of this point, we quote from three men who have had a long experience in feeding babies, and with whom we, from our much smaller experience, fully agree. Veeder (18), "Regardless of whether milk is certified, pasteurized, or raw, it is a wise precaution to order all milk given

to a baby under one year to be boiled." Howland (5) "The advantages of heating milk are so many and the disadvantages are so few it may fairly be said that this practice is or should be universal." Brennerman (23), "The summer complaints of former years have become less and less important, thanks to a dissemination of knowledge about hygiene and the early use of therapeutic foods, the infant welfare agencies, and the use of boiled milk."

Prepared Milks. When fresh cow's milk is lacking or cannot be trusted, we have to fall back upon some form of prepared milk. There are some who advocate the use of these products as a preference, but in the hands of most pediatricians they are used as a substitute. The great objection to their usage is that all too often the babies are fed according to the directions on a folder sent by the manufacturers, which is not only unfair to the baby, for each case should be handled as an individual case, but is a distinct reflection on the intelligence of the profession. To use these foods properly we must know something about them. We will not discuss all of the various milk substitutes on the market, but shall confine ourselves to certain selected ones which are most in use in this part of the country.

Dryco—a powdered milk. When 5 tablespoonsful of Dryco are added to 4 ounces of water a mixture is obtained which is equal to cow's milk in caloric value, with the same percentage of protein, somewhat higher carbohydrate and lower fat content. One tablespoonful to one ounce of water gives approximately a three-quarter strength cow's milk formula. One ounce of Dryco by weight is 8 level tablespoonfuls.

Klim—a powdered milk. One table-spoonful of Klim added to 2 ounces of water gives the approximate equivalent of cow's milk. It yields 21 instead of 20 calories to the ounce, with the protein, sugar and fat content about the same. One ounce of Klim by weight is slightly less than 4 level tablespoonsful.

Mead's powdered whole milk—a powdered milk. Four level tablespoonfuls, or one ounce, of Mead's powdered whole milk added to 7 ounces of water approximate cow's milk. The caloric value is 20 calories per ounce, fat 3.5%, sugar 4.75%, protein 3.35%, or practically the same as cow's milk.

These three products are the ones which we find mostly in use in this section of the country. Other products such as S. M. A., Recolac, Babygain, and Similac, are on the market, but lack of space prohibits their discussion here. In the formulae made from the powdered milks mentioned above, the carbohydrate is low and added surgar is indicated. It has been our experience that in the use of these products by practicing physicians, underfeeding rather than overfeeding is usually the trouble, when any criticism is to be made. We will not mention the condensed milks except to say that the majority of pediatricians feel that they have no place in the normal baby's diet.

Evaporated Milk. Largely through the work of Marriott (24) and Brennerman, evaporated milk has come to take its place as a factor of real importance in the feeding of babies. Evaporated milk is a product made by evaporating milk in a vacuum at a high temperature, for a short length of time. When mixed with equal parts of water, it is the equivalent of sterile, boiled, whole cow's milk. It has been the choice of many where good fresh cow's milk cannot be obtained. It has been of great value in the feeding of premature babies and is very convenient to use when travelling. We have used it extensively and feel that next to fresh cow's milk it is our best food for babies when breast milk is not available.

Lactic Acid Milk. Marriott was the first to advocate the use of lactic acid milk on a large scale. At first he used it with sick babies, but in recent years he has used it extensively in well infants (24). The babies have gained weight well. With regard to any ill effects, we quote his words, "An experience of eight years with the feeding of several hundred infants in welfare clinics, in practice and in the hospital, has served to convince us that there are no disadvantages to the routine and prolonged use of lactic acid milk so far as the infant is concerned." His directions for using the milk for infants are as follows: "use either boiled whole milk or preferably evaporated milk, diluted with equal amount of water, add 45 drops of lactic acid to the pint of milk, and an amount of Karo equivalent to one tenth of the total

formula. This is fed to babies under one year undiluted and they are given about all their appetites demand at four hour intervals. Not more than five feedings a day usually after the first month, and often not more than four after three months, are given. After infants have begun to take appreciable amounts of carbohydrates in the form of cereal during the second half of the year, the amount of Karo added to the milk is correspondingly reduced and by the age of one year, or fourteen months, omitted." In connection with this work of Marriott's it is interesting to note the results obtained by Brennerman (20) which we discussed under the head of boiled milk. They obtained the same good results when boiling the milk and adding lactic acid, Marriott attributing it to the lactic acid, Brenneman to the boiling of the milk.

Vitamins.—Two vitamins at least are necessary in the baby's food which are frequently absent, the anti-rachitic and the anti-scorbutic. The attending physician must see that they are supplied.

Anti-rachitis factor. Only in recent years have we come to understand the etiology of rickets. From the work of Howland and Kramer, Hess, Park, and Steenbock, we now know that not only must the necessary elements, calcium and phosphorus be present in the diet, but that another factor, termed Vitamin D, found in cod liver oil or liberated from the baby's own tissues when treated with sunlight or violet ray, must be supplied if rickets is to be prevented. For this reason, the baby should receive either plenty of sunshine or alpine light, or else be given a sufficient amount of cod liver oil, frequently both. How soon should these measures be instituted? Martha Eliot (25) has been able to demonstrate the presence of rickets early in the first year, often at three months of age. Her method of giving cod liver oil is as follows: "one-half teaspoonful twice a day to babies one month of age, at or before the second month, one teaspoonful twice a day." Even this amount may not completely prevent rickets, but will greatly facilitate subsequent control. Sun-baths should also be used, especially here in the South where they are available during the greater part of the year. Some definite schedule should be prescribed for the mother, remembering that the sunlight must hit the skin of the baby directly and not shine through window glass. At least one of the two, cod liver oil or sunlight should be started around the first month. Occasionally both are needed to prevent rickets.

Just recently, irradiated ergosterol has been put on the market under the trade names of Viosterol and Vigantol. It has proved to be of great value in the prevention and cure of rickets. For a complete discussion we refer one to Hess's (26) latest article on the subject, from which we quote the following: "Full term infants were protected from rickets in almost every instance, except when too small amounts were given. Eight to ten drops a day were used for prophylactic doses for infants who were growing at the normal rate, and this dose produces neither toxic symptoms nor hypercalcemia. If there are any specifics in medicine, irradiated ergosterol is certainly one."

Anti-scorbutic factor. Both breast milk and cow's milk contain some of the anti-scorbutic factor, in most cases sufficient to prevent scurvy, in some cases, however, there is an insufficient amount. Heating the milk destroys this factor. Proprietary foods caused 60% of the cases of scurvy in an investigation of the American Pediatric Society. It can easily be seen, therefore, why additional Vitamin C must be given any baby on artificial or heated milk and why it is safest to give it to those babies as well, who are using raw milk. The substance has been found to be present in the followings foods; listing them according to their relative content of this factor: orange juice, lemon juice, tomato juice, spinach, cabbage, carrots, and beans. Of these the best adapted for infant feeding are the first three. One-half to one ounce of orange or lemon juice or one to four ounces of raw or canned tomato juice a day are sufficient. This should be started at least by the second month, since scurvy may well develop by the sixth month and occasionally earlier.

After the sixth to the ninth month, according to the customs of the physician in charge, accessory foods may be added to the diet—but the discussion of these begin the next chapter of the baby's dietary and we shall not deal with them here.

In conclusion, we wish to say that although we have presented nothing original, we hope that we have been able to gather together some of the newer knowledge with regard to the feeding of infants which will be of help to those physicians engaged in the task of helping babies through the difficult first year of life.

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THE MANAGEMENT OF DECOMPENSATING HEART

By Hugh Smith, M.D., Greenville, S. C.

Before considering the active management of the sick heart let us review briefly some salient facts about this organ. The heart is a pump; a muscular, contractile organ. Its efficiency depends on the integrity of the muscle wall and the ability of that wall to perform work by contracting. There are other factors which affect its efficiency, chiefly the pressure within and without the heart to be overcome with each contraction, and, next, the competency of its valves. Competent valves ease the burden even in extreme hypertension cases. The integrity of the myocardium and of the valves might be impaired by various factors, such as acute infections, toxaemias, specific infections, chemical and bacterial toxins, malnutrition, wasting diseases, hypertension from arterial or renal disease, and even physical exertion.

In the presence of added burdens, either infections, hypertensive, or toxic, the first response of the heart is hypertrophy, with an increase in size and capacity. As this condition progresses there are superimposed focal or diffuse fibrotic changes with the result that we recognize as Chronic Myocarditis. With this stage we have hypertrophy, dilatation, fibrosis, loss of elasticity, and impairment of contractile power. This is the usual progress to heart failure. I have found Mackenzie's discussions of the heart of great help in grasping the functional capacity of this organ for work. He tells us that the heart has two work forces, one, the rest force which is in constant use and takes care of ordinary activity; the other, he calls reserve force which is called on in time of exertion, such as climbing stairs, running, lifting, and all such loads. As long as this reserve force is intact there is no decompensation. When we learn that a patient is now unable to do things that he has been wont to do, without shortness of breath or substernal oppression, we have the first evidence of beginning decompensation. As this condition advances the rest force is finally encroached upon, and we have an obvious decompensation. If you will think of the heart in this manner and remember that the presence of a murmur, or hyperten-

sion, or of any arrhythmias, does not necessarily mean decompensation, then you will be able to treat such conditions more intelligently. Instruments of precision, such as the vital capacity determination, the polygraphic tracings, or electrocardiographic studies, are not able to diagnose decompensation. It is always a functional thing, and clinical observations with experience is the only equipment necessary to diagnose this condition. I feel that we all pay too much attention to what we hear on auscultation and do not use our eyes and fingers enough. I have recently seen a young boy of eighteen, with a total aortic regurgitation of five years duration, with a tremendously enlarged left heart, with all the classical findings of such valvular lesions, with a diastolic blow that can be heard all around the chest and completely replaces the second sound, yet, whose heart is compensated. True enough he is a semi-invalid, but by taking excellent care of himself he has been through a fairly severe attack of influenza and one of bronchitis without a break yet.

The clinical findings of advanced decompensation I shall mention, only, for we are all perfectly familiar with them. Dyspnea, cyanosis, edema, cough, pulmonary congestion, swollen liver on to anasarca. The onset of decompensation may be sudden, as in acute pulmonary edema, with an attack of angina, or during excessive physical exertion, but ordinarily the onset is slow and the symptoms are added one by one. The heart which is working against a high pressure will gradually succumb when finally it is no longer able to pull the grade, although the load is often carried for years. The same applies to valvular defects. I want to state again that you can not determine decompensation or the need of treatment by auscultating the heart alone. Establish the habit of studying the heart before and after exercising, the blood pressure observations, the pulse rate, the change in quality of tone and of murmurs, and the response of the patient to exercise. These are all important in determining the functional state of the heart.

The management of decompensation begins always with rest. The length and degree of the rest depend upon the case. In advanced decompensation, with the usual signs as mentioned a few minutes ago, your patient is put to bed. The immediate effect of this is the removal of a big load from the heart. When on the feet gravity adds about five feet up grade to the return flow, and muscular activity increases this still more. In bed both of these loads are removed. This alone will often prove sufficient to clear up all the evidence of failure. If you have marked edema, with a diminished kidney output, then it is wise to add to your rest more active measures. Elimination by the kidneys and by bowel is important. Control the fluid intake so that it is less than the urinary return. Mild daily laxatives, a bland, soft and and semi-solid diet that is salt free, are enforced. A Carrell diet, which is seven ounces of milk at 8, 12, 4, and 8 during the day, if often very effective in clearing up edemas. Diuretics, when there is no underlying kidney damage, are often of tremendous help. The best of these, in my hands, has been diuretin. This is well given in five grain doses every six hours for four doses. If the pulse rate remains fast and the tension is low it is wise to give digitalis. A preparation of the powdered leaf is usually more dependable, though a standardized tincture will give results if given in large enough doses. The digitalis, besides slowing the heart rate and increasing the heart efficiency, will also act as a diuretic and speed elimination. If the heart is fibrillating give digitalis in large doses. In this type of heart you will get better results by using digitalis to its full effect. Here you have a rapid, totally irregular pulse, and a heart that sounds something like a trap drum. Compensation can be most quickly restored by digitalizing to the point of a two to one block with a marked slowing of the heart. Sometimes with the disappearance of the block the heart will assume a normal rhythm. The digitalis may be needed over a long period of time in small, tonic doses. This method of treating chronic hearts is not used enough.

During decompensation there is one complication that deserves special mention. Frequently these patients have recurrent attacks of orthopnea, which often occurs at night. The patient awakes in acute distress, gasping for air, unable to find any position that relieves him, most often sitting upright, hugging his knees. This condition is sometimes spoken of as

cardiac asthma because of the similar difficulty in breathing. The treatment here is always a hypodermic or morphia. The patient is frightened, and is acutely ill. The morphia will calm his fright, relax the tension and will usually prove sufficient to overcome the attack. Such attacks are often seen at the onset of decompensation. They are quite common in the middle aged arterio-sclerotic with hypertension. Where there is hypertension with chronic nephritis, evidenced by nitrogen retention, low phthalein, and nocturia, the diet becomes very important. A total salt restriction is indicated, a low protein diet is given, and the kidneys are rested by increasing elimination by bowel and by the skin. In the presence of uremic complications hot packs, hot mustard sponges, salines, and stimulation are very important. In the emergencies here black coffee by bowel is an excellent stimulant. Caffein sodium benzoate is probably the best whip we have for this type of case.

Acute pulmonary edema is one of the most interesting and most distressing heart complications. It is an acute decompensation. It is due to a disproportionate weakness of the left ventricle, back pressure through the left auricle into the pulmonary circulation, and increasing edema and transudation. Here we have a serious development, often within a few minutes. The patient is in acute distress with bloody, frothy fluid from the lungs, extreme air hunger, rapid, weak pulse, and great fright. The prognosis is always guarded. By following an active plan, such as I shall outline, these patients will often respond fairly rapidly and be out of immediate danger. Remember, always, that these patients are peculiarly likely to have other attacks. As soon as you see such a patient give him 1/4 morphia with 1/75 atropine. The morphia allays the fright and apprehension, while the atropine combats the shock. Having given this inject a big dose of digitalis. I find the digafoline, Ciba, a dependable product, and as it is in convenient ampoules it is always well to have it with you. Having done these two things, and not before, determine whether or not there is hypertension. If so inject 1/50 of nitroglycerin; if not inject camphor in oil. Repeat any one or all of these within twenty minutes if your patient is not greatly improved. Strychnine sulphate in 1/20 doses may also be used if the other measures do not control the condition. Where there is any anginal complication use morphia with the idea of relieving the pain, and use enough of it to do this. The attack having been controlled and your patient comfortable, do not allow him to return to activity too soon. Keep him quiet and at rest. Look after him as you would a pneumonia patient, and support the heart to ward off a second attack if possible. In hypertension give him nitroglycerin and digitalis. In the cases without hypertension use digitalis and strychnine.

Having treated the decompensation we have to get the patient back to work. This can not be done too slowly. The method used with tuberculars is ideal here. Start them slowly with chair rest, slowly increase their activity with controlled walks, and always keep their exercise below their fatigue point.

In cases of moderate decompensation, which we often see in elderly patients with chronic myocarditis and in younger patients with valve defects, judicious use of digitalis and proper control of activity will serve to keep these patients comfortable for long periods of time. Any heart with a lessened reserve force should be rested for an hour or more during the middle of the day. The period of rest is an individual problem with each patient. Such cases are often able to compensate fully for eight hours a day when this work is done in two four hour periods with two or three hours of rest between. The same heart might fail completely to carry on eight hours on a stretch. These people should be given as much freedom as possible, but the total time of activity will be much increased by following such a procedure as suggested. If you will explain to the patient the simple mechanics of his heart action, let him see just what rest will do for him and why it does this, you will find him ready and anxious to cooperate. Treat the heart as a pump with a definite amount of work to deliver. As long as the pump is efficient it will carry on steadily, and its factor of safety is a large one. Once the pump is damaged and its efficiency impaired the work must be diminished to suit the pump. We are unable to renew the pump to

suit the load. To maintain compensation we must control the work done by the heart.

PEPTIC ULCER OBSERVATION BASED ON 93 CASES*

By Sam Orr Black, M.D., Spartanburg, S. C.

Peptic ulcer produces a train of symptoms frequently referred to as dyspepsia.

Dyspepsia may be organic or functional. When organic, it may be due to to a lesion within or without the stomach and duodenum. The intra-gastric lesions may be ulceration, malignancy, polyposis, tuberculosis, lues and what not. The most frequent intra-duodenal lesion causing it is ulceration. Duodenitis will also cause it. Lesions outside of these two organs which will produce dyspepsia may be in the pancreas, liver, gall bladder, appendix or intestine. Chronic constipation is one of its most frequent causes.

When functional in origin, one usually finds other evidences of an unstable nervous system.

There is now a rather clear cut clinical picture, more or less characteristic of peptic ulcer, which when taken into consideration with certain Roentgen Ray and laboratory findings, tend to clarify the symptomatology, and to establish the diagnosis.

In a given dyspeptic, the primary object is to determine whether the disturbance is organic or functional.

A functional dyspeptic is one of the most trying individuals the physician has to deal with. The patient is indefinite with his or her story. The periodicity and food ease are absent. There are usually many symptoms referable to distant organs; Headache, fatigue, numbness, pin pricks, blind spells, back and leg ache and insomnia are almost always described.

These individuals require tact, kindness, sympathy, hydro and electro-therapy, occasionally placeboes and sedatives if necessary, to induce sleep. They seem to thrive on individualization. Extra time and patience spent with them will often keep them from the shower bath and the electric pad of the Chiropractor.

In 2000 necropsies recently reported by Hayes and Robertson, evidences of gastric and duodenal ulcer were found in 378 cases—about 17 per cent.

Peptic ulcer constitutes by far the most frequent cause for surgical attack upon the stomach and duodenum. The two together however, constitute only 1.7% of all the intra-abdominal operations.

Gastric ulcer is about eight times less frequent than duodenal ulcer. Peptic ulcer is four times more frequent in the male than in the female.

Over 90 percent of the gastric ulcers occur on the posterior aspect of the middle one-third of the lesser curvature of the stomach. Fully 95 percent of the duodenal ulcers occur within one-half inches of the pyloric sphincter.

Both gastric and duodenal ulcer occur in the same individual in about 3.5 percent of all the cases.

The average age at which operation is performed is 47 for gastric ulcer and 43 for duodenal. (Balfour).

In our experience, there is but little difference in the clinical picture of the two ulcers. The surest way of locating an ulcer anatomically, is by the X-Ray.

The etiology of ulcer is not known. The persistence and severity of its symptoms seem to be connected with the acidity of the gastric juice and the presence of focal infection.

Rosenows' early work on the isolation of streptococci from excised ulcers and the reformation of ulceration in the corresponding portion of an animal's anatomy after intravenous injection of the organism, has recently been substantiated at the University of Edinburgh.

This work, to my mind, is conclusive that any treatment not designed to incorporate the eradication of foci of infection is incomplete.

There recently returned to us a man upon whom three years previously, we had performed post gastro-enterostomy for a large callousedulcer near the cardiac end of the stomach.

He had considerable pyorrhea at the time of his operation and he was strongly advised to consult his dentist at the time of his discharge from the hospital. This he failed to do. For three months prior to his return he had had

*Read before the South Carolina Medical Association, Charleston, S. C., May 8, 1929.

much pain, burning and sour stomach with frequent emetation of gas and burning fluid.

Ten days of intensive medical treatment failed to allay the symptoms. He was re-operated. There was much evidence of extensive acute inflammation. The old ulcer had become reactivated. Much the same thing occasionally happens after gastro-enterostomy for duodenal ulcer. The ulcer will re-light or flare up and produce the same symptoms, though milder in character. These recrudescences have ceased after removal of infected tonsils, apical abscesses, or other points of infection.

Duodenitis may exist independent of ulceration. It is usually acute, but occasionally is chronic. It frequently follows acute tonsillitis, acute arthritis, or other acute local or systemic infections.

In its simplest form, there is congestion with stippling in the serosa. Lymphocytic infiltration occurs in the submucosa but insufficient to produce induration. There is little if any change in the mucosa itself; never any ulceration, but occasionally an abrasion or two which permits of hemorrhage.

Duodenal palpation is negative. The lesion though usually localized, may be diffuse. Nagel has recently reported 26 cases, 23 percent of which had hemorrhaged. Considerable attention has been given to the condition since Judd devised his operation of removal of the duodenal cap and partial anterior pylorectomy for ulcer on the anterior wall of mobile duodenum. Histologic study of these excised tissues found the hitherto undiscovered lesion, now called simple duodenitis.

But a few weeks back, a man aged 26 came to us with the following history. Two weeks ago he had an acute tonsillitis. Four days ago while quail hunting he had an uneasiness in the epigastrium, followed shorty by a *feeling* of *weakness* and he thought he would *faint*. He stopped for a while, then resumed his hunt, but soon noticed that he was unduly tired. That night he ate but little supper, vomited once and at 10 P. M. passed a large bloody stool. The following day and the next, he vomited once, had some sour stomach, passed blood several times from the bowel, finally fainted and was brought to the Clinic in an ambulance with a hemoglobin of 26.

The following morning he was given a trans fusion of blood. Milk with a 5 gr. alkali was given at two hour intervals, when awake, along with an occasional small dose of morphine. The patient made an uneventful recovery. X-Ray examination was negative. Gastric analysis was not done. Our tentative diagnosis was acute duodenitis. Rives has recently reported a somewhat similar case in which operation performed at once revealed an acute tiny hemorrhagic area on the anterior aspect of the first portion of the duodenum.

We have now had 93 cases of peptic ulcer. Twenty-eight were gastric and sixty-five were duodenal. Of the gastric cases, five occurred in the female and twenty-three in the male. The average age of our gastric cases was 50 of the duodenal 41. Ten of the gastric ulcers and 9 of the duodenal were perforated when first seen.

The treatment of peptic ulcer is medical or surgical, with the removal of foci of infection when detected. The underlying basis of all treatment is rest of the part and the reduction of the acidity. Surgery of course affords the surest and the quickest way of securing relief.

There are almost as many medical treatments as there are men doing Gastro-Enterology. No statistics, so far as I know, have yet been published—which proved that remissions were of any longer duration after the treatment of the late Dr. Sippy, than after those of other men. Practically all ulcers pursue a wave like course, and remissions are prone to occur irrespective of whether any treatment be given. Many of them get better for a varying length of time without any treatment at all.

Medical treatment affords a better opportunity for improvement in younger patients, and when the symptoms have been present for a period of time not exceeding eighteen months.

In my own mind, recumbency is only necessary during the very acute state of the exacerbation. After the first few days, when the pain and distress has subsided under milk and gruel feedings at one to two hour intervals, the patient may be up again. If he returns to work, as many patients are compelled to, for economic reasons, it is imperative that he be fed in order to maintain strength and energy.

He should be given three meals daily, each one free from roughage. In addition he should

take 4 to 6 to 8 oz. depending upon his size and weight, of a mixture of milk, raw eggs and cream, or of a cereal gruel at two hour intervals after meal time and upon retiring. Should he awaken during the night, milk and a few crackers should again be ingested. These feedings furnish material for the gastric juices to work on; this reduces the acidity, lessens the pain, provides nourishment, restores strength and the individual is enabled to carry on. Often times a digression from this routine, after six or eight months, will precipitate a recurrence of all the old symptoms.

Gastro-enterologists, men older than myself, who have followed this line for ten years or more, occasionally tell me that they seriously doubt if chronic gastric or duodenal ulcer is ever cured by medical treatment.

Time forbids our remarking on the complications of gastric and duodenal ulcer, other than to say that they are bleeding, perforation, obstructions and occasionally super-imposed malignancy when situated in the stomach.

We always try to remove the chronic calloused gastric ulcer by means of cautery or knife excision before doing gastro-enterostomy. In two recent cases, the stomach wall adjacent to the ulcer measured 3/4 an inch in thickness. Obviously such pathology could never be absorbed except by direct attack.

The surgical procedures heretofore designed for peptic ulcer are many. They have their enthusiastic adherents. There is no one operation suitable for every ulcer. The procedure will vary with the location of the ulcer, the age and condition of the patient, the acessibility of the diseased area, and the mobility of the affected part. In the main, it is our opinion that a conservative surgical operation will give a higher percentage of cures and more comfort over a longer period of time than will an ultra-radical one.

Experience with simple excision for gastric ulcer has been that about one-third of them get along nicely and remain symptom free. The other two-thirds have sufficient trouble to warrant further surgery or treatment at a subsequent date. It is therefore, our policy to combine some form of Gastro-enterostomy, with the excision, whenever the patient's general condition warrants.

Rarely, if ever, do we simply perform gastro-enterostomy for gastric ulcer. If the ulcer bearing area can be directly attacked, we go after it either by cautery or knife excision. When the ulcer is on the upper or anterior wall of the pylorus or duodenum, near the pylnie ring, we excise it, and leave the posterior wall intact. The closure is made by beginning the anastamosis at the top and carrying it down to about the middle of the anterior aspect and tying it there. Then begin at the bottom and run up to and meet the suture line already made. This technique simplifies closure, and insures perfect coaptation at the upper and lower angles respectively.

If the ulcer is very large and on the posterior wall down near the plyorus and causing obstruction, one is occasionally compelled to do simple posterior-gastro-enterostomy. As a matter of fact this is the type of case in which this operation does the most good. There are now an increasing number of surgeons advocating pylorectomy for this condition with direct anastamosis, the so-called Bilroth No. 1, operation. An alternative is to close both the stomach and duodenal ends and to connect the stomach to the bowel by means of a new opening, a modification of the Bilroth No. 2. Still another alternative is to close and invert the duodenal end and to anastomose the stomach end direct to the jejunum, the so-called Polya, either anterior or posterially to the transverse colon.

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SOME CURES RELATIVELY, OTHERS ABSOLUTELY ORIGINAL

By G. P. Neel, M.D., Greenwood, S. C.

Osler and McRae defines erysipelas as a special pyogenic infection caused by the streptococcus erysipelatis characterized by inflammation of the skin with fever and toxaemia. The complaint of most people I have seen "burns like fire"—hence "St. Anthony's Fire."

For this condition I have found, I think, a never failing and instantaneous cure. I have been using this therapy for twenty or more years and have found it a very valuable aid.

Eighty-eight per cent carbolic acid is applied over the inflamed surface followed by ninety-five per cent alcohol. The alcohol must be 95% and ethyl, otherwise it will not fully neutralize the acid.

A few cases occurring this year:

H. L. K. Male. With erysipelas over face and quite ill. Phenol and alcohol used. He said it burnt in a few places, but felt so much better wished another application, which was refused and he was dismissed cured.

J. P. Y. Male, 48. Came to the office with one eye "burning like fire," and swollen shut. Phenol and alcohol, and he returned to work, despite my insisting on his going home and to bed.

J. G. A. Male, 45. Consulted me, badly frightened with erysipelatous inflammation on right side of face and neck. Phenol and alcohol to inflammatory area. Next day all subdued but the ear, which was still bady inflamed, and blood red. Mr. A. was badly frightened and insisted on another dose. I did not think it advisable, and so advised him. The next day his wife reported him well and at work.

W. A. M., Male, 26. Called at the office with an infected sore on his thumb, and red streaks extending from the sore up the arm to the elbow. In my absence, Dr. H. dressed him for me. That night at eleven he called me stating his arm was paining and burning him very much. I had him meet me at the office, and used acid and alcohol from the axilla,— the point to which the red streaks had extended— to the sore on the thumb. The acid was used only over the discoloration, and over a very sore spot in the axilla. The next morning the young man was quite happy and had only a small sore on the thumb to contend with.

Mrs. A. Something over eighty years, had an erysipelatous inflammation over the head and a part of the face. Phenol and alcohol were applied over the inflamed area. The next day she was free from the burning pain over head and face, but quite weak, and was advised to keep her bed for two days, then up in a reclining chair, and nutritious food. No further trouble.

M. K., age 17. Came to the office—"face burning like fire." He had an erysipelatous inflammation over the face. Phenol and alcohol used. When I next saw him, he had called to ask me what he owed for his "face wash."

Just as I had completed this paper a lady in her thirties came in. She was feeling ill, with slight fever. She had an erysipelas about her heel. Her leg was swollen from heel to knee, and was "burning like fire." She stated she had a similar inflammation four years ago and was treated by my niece, now a rising young M.D., of Atlanta. She was insistent on the same treatment as before. I used acid and alcohol and advised her to go to bed and elevate her foot. No further treatment.

If memory serves me right Osler and McRae speak of erysipelas being at times endemic and epidemic. It would seem that I had struck such a condition this year.

I believe that phenol and alcohol would relieve if applied around the inflamed area, but I have not had the temerity to use it so.

All cases should be carefully examined, and especially the urine, and if much albumen a little care should be used with the phenol. Yet I do not believe there would be as much danger, from the therapy as there would be if the disease should be left to nature as usual.

PRESIDENT'S PAGE

By C. R. May, M. D., President South Carolina Medical Association

An appropriation of $20,000.00 is to ask of the present Legislature for the purpose of establishing a Health Education Division of the State Health Department. The bill is to be properly drafted and presented. The following outline embraces its main features. The money is to be expended as follows:

A person in charge of this division with an office and a secretary. The conduct of the office will include:

(1) Distributing health articles to the press of the State, daily, weekly, church, secular, press.

(2) Publishing monthly a health bulletin, to be sent gratis to all who request it.

(3) Instructing in health teaching the prospective teachers in our normal schools and colleges—this with a view to having departments of health education in all our larger schools and colleges.

(4) Disseminating health knowledge by lectures, moving pictures, and by any other way the gospel of health can be spread.

The greater part of this appropriation will be spent in printing and postage.

Health knowledge must be given our people if we expect to improve our vital statistics, to prevent disease, to prolong life, to increase the efficiency of our citizens. Our State Medical Association is behind this measure. Our State board of health wants it. We must get all the support we can from the physicians and the laity if the bill is to be passed.

G. T. TYLER, M.D., Chairman,
Committee on Public Health and Legislation,
South Carolina Medical Association.

EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M. D., F. A. C. S., CHARLESTON, S. C.

THE NEUROLOGIC ASPECT OF NASAL INFECTIONS

Dr. S. I. Ruskin, Arch Otolaryngology, Oct., 1929, pg. 337-383

One gets not only the symptomology from the direct influence of the diseased area on the nerve filaments supplying it, but also remote effects through pathways that at first glance appear impossible but which in careful analysis show direct route from the diseased mucous membrane. It is the purpose of this paper to direct attention to this avenue of disturbance which is equally deserving of consideration with that of the influence produced on the system by the absorption of the toxic products.

The effect through chronic nerve irritation induced by the inflamed sinus mucosa on the vegetative nervous system has hardly received the attention it merits.

The nerve tracts through which these influences are effected are the trigeminal system, the facial nerve system and the vegetative nerve system.

The success of its adaptation is dependent on the reflex as well as on the direct effects of nasal stimuli. In the nasal mechanism the olfactory nerve probably does not play a more important role than the stimulation of the trigeminal, facial and vegetative systems. The animal scenting a change in environment reacts reflexly with its eyes and ears and its sympathetic and endocrine systems. The ammoniac odor of the urine of a dangerous enemy calls into instant play not only the epinephrine mechanism of the sympathetic system, but also the facial expressions used by some animals to strike fear into their enemies, as well as an increase in acuteness of hearing and sight and the sensitiveness of the face, thus bringing to play all three nerve tracts.

Salivation associated with smell is related to the nasal ganglion through the nervous intermedius of Wrisberg.

The trigeminal nerve has its great ganglion, the gasserian, within the cranial cavity. Leaving it are the three great trunks—the opthalmic to the eye and nose; the maxillary to the nose, cheek and mouth and the mandibular to the mouth and lower jaw. Each of these large trunks has slung on it a small ganglion possessing sensory, motor, and sympathetic fibers. The opthalmic trunk has the ciliary, the maxillary, the sphenopalatine, the mandibular and the otic. Developmentally, the trigeminal system has probably had the chief function of adjusting the animal to its environment, with the three ganglions acting as reflex centers for rapid visceral reactions. Through these ganglions one gets the sympathetic manifestation of fright.

If I may digress, the frequency of a history of so-called "nervous breakdown," means usually a state of continuous fright, and is strikingly frequent in cases of nasal sinus infection. The sympathetic filaments from the cavernous plexus run to the ciliary ganglion, those from the internal carotid and superior cervical sympathetic to the nasal ganglion and those from the middle meningeal to the otic ganglion. One, therefore, can profoundly affect the sympathetic system through the nasal ganglion. In the nose is the only sympathetic nerve center that is placed superficially, exposed to disease processes and within easy access for treatment and experimentation.

The whole interior and exterior of the nose is supplied by the anterior and posterior ethmoids, from the first division of the fifth and from four branches of distribution from the sphenopalatine ganglion which has the sphenopalatine nerves from the second division of the fifth as its connection with the fifth nerve.

Irritation of the nerves, strange to say, arise from two widely separated nasal states of pathology. The one in the acute stage and the other in the old chronic stage after the secretion has been absorbed and induced in the

membrane a thickening, and in the nerves a low grade neuritis hyperplastic changes in the nose or its sinuses.

The clinical picture may be symptomatic of migrain or opthalmic tic, maxillary, neuralgia, mandibular neuralgia or combined trigeminal neuraligia with tic conlomeux and these may be relieved by treatment of the nasal ganglion, the sphenopalatine ganglion or the anterior or posterior ethomidal nerves, or palatomaxillary canal.

I shall now leave the trigeminal system and turn to a consideration of the facial nerve system and the nose. Developmentally, the facial nerve serves a much greater role in the lower animals than it does in man. In fishes it takes over, to some extent, the function of the trigeminal system. Here it plays prominently a sensory function. In the higher forms it is an intergral part of the protective mechanism, innervating the muscles of the face in a manner to drive terror into its opponent. Especially significant is the action of the muscles surrounding the eyes, the action of the orbicularis oculi in narrowing the palpebral fissure, the corrugator supercili in bringing the eyebrows together and the frontalis in bringing the eyebrows down in a menacing manner. The interesting thing is that, in chronic irritation of the nasal mucosa with irritation of the facial nerve, this same mechanism is called into action. As a result of the unnecessary overaction of these accessory muscles a distinct headache characterized frequently as "ocular headache" develops in these patients. Whereas the stimulation of the facial nerve mechanism in the lower animals by food or enemies is only temporary, that induced by disease processes in the nose is continuous, and exhausts the patient physically and mentally. Observation on the eye are consistently negative and glasses produce practically no improvement. The eyes feel heavy, tired and uncomfortable. The pain across the back of the head, which the patients complain of, is caused by the pulling forward of the scalp by the frontalis muscle. These conditions frequently are encountered under the diagnosis of "asthenopis."

The motor facial is intimately associated with the sensory facial, the nerves intermedius of Wrisberg, which has a geniculate ganglion on the motor facial and from which comes the great superficial petrosal, which takes taste fibers to the roof of the mouth, side of the mouth and tongue, it also carries tear fibers which finally go to the lacrymal gland by way of nasal ganglions.

Since, however, the lacrymal gland has a double innervation, the tear secretion cannot be completely affected in this manner, but is partly so affected.

Those pains usually described as part of the "Sluder Syndrome" of nasal ganglion neuralgia referable to the back of the head follow closely the distribution of the facial nerve rather than that of the trigeminal. (This claim is again brought out. I wrote of it in an abstract a year or so ago.)

There are cases in which there is either a distinctly front half headache in nasal disease or a distinctly back half headache, has led me to suspect that I am dealing with two mechanisms, one a trigeminal and the other a facial.

There is, however, a good deal more to this question of headache than merely a matter of distribution. There are two different forms of pain. The pains in the front half of the head are usually typical sensory pains of trigeminal origin; those in the back half are myalgic, muscle pains. The sensation is that of stiffness and soreness comparable to rheumatic pains; frequently there are distinct myalgic nodes along the origin or insertion of the cervical muscles, frequently along the sternocleidomastoid and especially at the origin of the mastoid tip. This is a distinct condition, different from trigeminal pains. This is also the site of tenderness described as being behind the mastoid. These muscle attachments are tender to pressure. Halle considered this a distinct entity, but the interesting thing is that cocainization of the nasal ganglion quickly relieves this myalgic state and practically dissolves the nodes in a few minutes. What now becomes of the analysis of this back half headache? Merely this: Along the distribution of the facial nerve and its communication, one finds painful states, chiefly myalgic. These painful states are readily relieved by cocainization of the nasal ganglion, and were, therefore, classified by Sluder under the heading of the nasal ganglion nauralgia. Actually, one is influenc-

ing at the sphenopalatine ganglion the terminal fibers of the great superficial petrosal nerve through which the facil never is reached. I also proved this by stopping the pain in the ear in herpes zoster oticus in two cases by coccainization of the nasal ganglion.

Not only can the autonomic distribution along the pathways of the facial nerve be affected with the production of head pains, but a more diffuse effect on the involuntary nervous system can cause similar states in other muscles of the trunk and extremities. Sluder suggested that the pain in the neck, shoulders, arm and forearm is a manifestation of the involuntary nervous system, probably the sympathetic. This mechanism which I have described can be used to explain the almost uncanny results obtained in cases of severe pains of the shoulders and arms, lumbago and sciatica.

The interesting feature is that systemic therapy directed toward depression of the cranial autonomic produces a similar effect. In this manner I have supplemented the nasal treatment for the outstanding autonomic conditions with dessicated pituitary whole gland and calcium glycerophosphate.

Irritation affecting the local autonomic secretory fibers in the nasal ganglion—

Sneezing and rhinorrhea are the chief symptoms. This sneezing and rhinorrhea can represent either the effect of systemic influences on the nose in allergic states, or the effect of local nasal pathologic changes on the nasal ganglion directly. These vasomotor states react favorable to injection or treatment of the nasal ganglion.

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To the members of the Woman's Auxiliary to the South Carolina Medical Association—Greetings!

As your president I am hoping that you have planned to endeavor during the remainder of our Auxiliary year to definitely give your cooperation in every possible way to bring about better health conditions in your locality.

We are asked to stress this as our outstanding work and since it requires but a natural procedure for doctors' wives I am confident that you will be able to identify yourselves with P. T. A., Civic Associations, T. B. Associations and other organized groups doing work of this character.

For our own State Auxiliary's special we are trying to get the life histories of our deceased and living doctors in each county. No matter where you live, if you can assist in giving accounts, please offer your information to the County Auxiliary president.

Just four more months will pass until we convene in Florence. Do all that you can for the cause's sake and bring good reports for the encouragement of others.

With every good wish for the best to come to you in 1930,

Sincerely,

Your President, Mrs. Waller H. Nardin.

The editors of the Journal have graciously given a page for the use of the Auxiliary. An excellent way for the Auxiliary to show appreciation would be to make use of it.

Suggestions for and reports of Auxiliary meetings and any items which carry information that will interest and aid the auxiliaries should be sent to the Publicity chairman by the seventh of the month. The page is yours, use it. Is your auxiliary having some outstanding programs? Let us hear about them. Have you any worthwhile plans? Give other Auxiliaries the benefit of them. Perhaps you cannot send any items but would like to see more information on the Auxiliary page about programs, or conventions, or some line of Auxiliary work. If you will let your publicity chairman know what you would like maybe she will be able to get the information for you. Remember that what is of interest to you will no doubt be of interest to others.

CONVENTIONS

Conventions are a source of information as well as pleasant entertainment. Strange to say that although the information is more lasting and beneficial, the pleasant entertainments are always reported first. From the Southern Medical Convention at Miami the only news received thus far by the publicity chairman concerns the marvelous hospitality of the people of Miami, the delicious luncheons, the wonderful trip to Habana, and the delightful association with interesting people who made the convention so pleasant that it will always be happily remembered.

Speaking of the pleasures of conventions reminds one of the convention of the American Merical Association in Portland Oregon last July. Portland has been called the city of roses and it is well worthy the name. Roses are planted in every available sport. They are no more beautiful, however, than those of South

Carolina and not as fragrant. The air was clear and dry and there was no rain in Portland in July, thus the weather contributed quite a bit to the comfort of the visiting doctors and their families. Nothing was left undone that would enhance their pleasure, luncheons, teas, receptions, a dance, garden party, horse show and a salmon barbeque were some of the delights of western hospitality which were arranged in a setting of unusual beauty.

A trip to snow-capped Mt. Hood was a rare treat to the delegates. Mr. Hood reaches an elevation of 11,225 feet and the highway is winding and at times you seem to cross its glacier paths while at other points along the way you look up to its heights. The highway is so close to the mountain that you can see the lookout station at the summit. It is from this station that the forest firest are spotted. From he number of fires and their widespread destruction we wonder if the spotters are perchance slightly near sighted. It is possible to completely circle Mt. Hood in a single day and on the Columbia River Highway both going and returning there are many points of interest to intrigue the traveller.

Everywhere one found unexpected courtesies. Several large department stores had special rooms for the convenience of visiting doctors' wives and families. Stationery telephone and stenographic service were provided without charg. Afternoon tea was served and guides, provided by the store management, conducted the ladies through the various departments. By the way, they were not expected to purchase anything and the guides did not so much as insinuate that anything was for sale.

Through the courtesy of the United States Department of the Navy, the Hospital Ship "Relief" was anchored in Columbia River Harbor at Portland. It is the largest hospital ship in the world and has accommodations for 500 patients. It was of great interest to many who took the opportunity of going through it.

The Woman's Auxiliary to the Ridge Medical Association held its regular December meeting at the home of Dr. and Mrs. E. C. Ridgell.

The home was tastefully and artistically decorated for this yuletide meeting.

A most interesting program was rendered by the members. Christmas Carols and instrumental solos, reading of poems and a splendid papter entitled "How Christmas is observed in other lands" constituted the program.

The members voted to buy a "T. B." bond and after discussio nof other things pertaining to community welfare, the meeting adjournend and delicious refreshments were served.

-:- NEWS ITEMS -:-

The following South Carolina doctors attended the Southern Medical Association meeting at Miami in November.

Banov, Leon, Charleston—Columbus.
Boyd, William A. (wife), Columbia.
Cooper, Ernest (wife), State Park.
Corn, C. P. (wife), Greenville.
Doughty, R. G. (wife), Columbia.
Fisburne, Skottowe B. (wife and daughter,) Columbia.
Hardy, B. F., Dillon.
Horton, C. C., Pendleton.
Jervey, J. W., Greenville.
Kibler, C. L. (wife), Columbia.
Lynch, Kenneth M., Charleston.
Marton, F. L. (wife), Mullins.
Mayer, O. B., Columbia.
McLeod, F. H. (wife), Florence.
Murray, J. G., Greenville.
Powe, J. L., Hartsfield.
Scarborough, H. L. (wife), Conway.
Smith, D. Lesesne, Spartanburg.
Tyler, Geo. T., Jr., Greenville.
Weston, Wm. (wife), Columbia.
Wilson, Lester A., Charleston.
Wyman, Benjamin F. (wife), Columbia.
Anderson J. L. (wife), Greenville.
Bates, Charles O., Greenville.
Bates, W. L., Greenville.
Beach, Mylnor Wilbur, Charleston.
Bell, Jesse W. (wife and daughter), Walhalla.
Black, Samuel Orr (wife), Spartanburg.
Briggs, D. K. (wife), Blackville.
Brown, A. E., Greenville.
Bruce, R. C., Greenville.
Carter, J. T. (wife), Spartanburg.
Davis, T. M. (wife), Greenville.
Fike, A. R., Spartanburg.
Fuller, R. M., Greenwood.
Gray, J. Louis (wife), Anderson.
Ham, Coyt (wife), Columbia.
Mason, H. E. (wife), Spartanburg.
Mauldin, Leland O. (wife), Greenville.
Nesbitt, J. N., Gaffney
Peeples, Johnston, Estill.
Peeples, M. L., Scotia.
Prioleau, Wm., Charleston.
Scurry, C. J. (wife), Greenwood.
Shirley, J. F. (wife), Honea Path.
Stuckey, T. M. (wife, Mr. and Mrs. J. F. Cleckley), Bamberg.
Watson, J. E. (wife), Anderson.
White, J. W. (wife), Greenville.
Williamson, J. P. (wife), Ware Shoals.
Wilson, T. R. W., Greenville.
Wylie, A. M. (wife), Chester.

Greenville County Department of Health,
Greenville, South Carolina,
November 25, 1929.

Dr. Edgar A. Hines,
Secretary, State Medical Association,
Seneca, South Carolina.
Dear Doctor Hines:

Dr. George T. Tyler, of this City, is much interested in a movement to have established a publicity division of the State Health Office in Columbia; and has talked to me several times relative to the matter.

Please list me as one of the County Health Officers fully in accord with Dr. Tyler's suggestions. I have frequently come in contact with the North Carolina Public Health Officials and have read much of their literature on the care and treatment of contagious diseases. These articles have been very instructive to me and, being written in every day parlance, must necessarily be so to the laity. I find the country people in this County are very desirous of enlightenment along health lines and especially with regard to communicable diseases.

If our State Health Office could be empowered to write popular articles on disease conditions, sanitary subjects, personal and community hygiene, etc., I feel it would be of incalculable value to the people in general as well as to physicians and sanitarians.

With kind regards and best wishes, I am,
Very respectfully yours,
Baylis H. Earle.

P. A. Surgeon, U.S.P.H.S., Retired, Commissioner of Health for Greenville County, S. C.

Dr. William M. Carpenter of Greenville has left the Wilmer Ophthamological Department of Johns Hopkins Hospital and his present address is Oto-laryngological Department of Bellevue Hospital, N. Y. Dr. Carpenter recently passed the National Board of Medical Examiners.

The recent death of Dr. W. D. Ferguson of Laurens removes one of the most active and popular general practitioners of the Piedmont. Dr. Ferguson was a strong supporter of organized medicine. His genial personality added greatly to his popularity in both medical and civic circles.

The South Carolina Pediatric Society held its annual meeting early in January in Columbia under the Presidency of Dr. E. A. Hines of Seneca. this virile organization is highly successful in both stimulating, preventive and curative medicine in the domain of child-hood. The slogan

for the coming year is the lowering of infant mortality in South Carolina. The new officers are: Dr. M. W. Beach, Charleston, S. C., President. Dr. J. I. Waring, Jr., Charleston, S. C., Vice President and Dr. J. P. Price, Florence, S. C., Secretary.

The January meeting of the Second District Medical Society was held at Leesville under the Presidency of Dr. A. L. Ballenger of Batesburg. Dr. G. P. Neal of Greenwood, Dr. E. A. Hines of Seneca, the State Secretary and Dr. C. R. May, President of the State Association were invited guests. The program was replete with instructive papers. The banquet was a special feature of the occasion. Dr. D. M. Crosson, Ex-President of the State Association was the happy toastmaster and many members were called on for remarks.

To the Editor:

A Rather Singular Coincident:

On yesterday, Oct. 7, 1929, I removed a young man's appendix. He is quite a Nimrod, and also a faithful disciple of Isaac Walton. After the operation was over, I decided to demonstrate to the family the absolute necessity of the operation. The young man had never been confined, or had an acute attack, and he and the family were somewhat skeptical. When I opened the appendix four number seven shot were found, each in a separate lake of pus. I failed however to find the fish hook.

G. P. Neel, M.D.,
Greenwood, S. C.

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The Journal

OF THE

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EDITORIAL

OUR STATE HEALTH DEPARTMENT

Elsewhere in this issue appears a concise but comprehensive report by our State Health Officer. Under the leadership of Dr. James A. Hayne the State Board of Health of South Carolina has advanced until it is now recognized as one of the foremost health departments of the country. From just a few thousand dollars appropriated twenty years ago the Board now from various sources expends approximately a quarter of a million dollars annually. The wisdom of having the activities of the Board under the direction of the State Medical Association through its Executive Committee has been repeatedly verified. Indeed probably only one other State in the Union can boast of such a unique and fortunate relationship between the State Board of Health and the medical profession. It is true that now and then criticisms may arise under this or any other plan but we believe that under the present regime which has existed since about 1876 more progress is likely to be forthcoming than would otherwise be the case. The report of the State Health Officer deserves to be carefully read by every member of the State Medical Association.

MUCH GOOD READING IN THIS ISSUE

A careful perusal of this number of the Journal will disclose numerous interesting articles and comments. The original contributions deserve more than passing notice. We would call special attention however to the society reports and programs of meetings held at different times. At the present time the Secretaries of the various constituent societies are doing splendid work in reporting through the State Journal promptly the meetings of their respective societies. Many of our readers voice the opinion that these reports constitute the best feature of the Journal from month to month.

There are a few societies not yet reporting. Many of them have exceedingly interesting scientific programs. If all of them made reports regularly it would be mutually helpful not only to the membership but to other officers who are charged with the planning of programs from time to time.

TITLES COMING IN FOR FLORENCE MEETING, MAY 6, 7 and 8

At this writing very good progress has been made on the program for the next annual meeting. It is highly desirable that some of our best general practitioners appear on the program. We undertook recently to tabulate the relative proportion of specialists and general practitioners as listed in the membership of the State Medical Association. 279 doctors indicated in the Directory that they were either specialists or part time specialists, leaving 561 doctors, who are presumed to be general practitioners. At the present time there are 1303 doctors in the State. Certainly a very large number still are in general practice exclusively. They make up the majority of every general medical meeting and we should hear from them oftener on the floor.

ORIGINAL ARTICLES

THE PREVALENT MENTAL DISORDERS AND SOME METHODS OF THEIR PREVENTION*

By E. L. Horger, M.D., Columbia, S. C.
Clinical Director, South Carolina State Hospital

The importance of this subject can not be too strongly emphasized when we take into consideration the cost of insanity to our state, and the amount lost to society because of the inability of the afflicted to produce. It is impossible for one who is unfamiliar with mental diseases to realize the heartbreaks and, in some cases, the humiliation brought by disorders of the mind to family and friends. [1]In the state of South Carolina during the year 1928 there were admitted to the State Hospital twelve hundred and seventy-four patients, including admissions and readmissions. The daily average under treatment was two thousand, eight hundred and fifty-six. [1]It cost the state for the maintenance of its insane that year $941,126.-04. If to this amount be added the loss in earnings of those mentally afflicted, the sum total lost to society is much larger. This does not include all the losses brought about by mental incapacity. Some of the mentally afflicted are confined to the South Carolina State Training School at Clinton, while others are cared for in private institutions, homes and almshouses. It is also possible that a few inmates of the industrial schools of our state are there because of defects of the mind.

One might raise the question: why are disorders of the mind so prevalent in the state? [2]Statistics show that South Carolina State Hospital on January 1, 1923, was caring for 143.4 per hundred thousand of the total population; while the average number cared for in the United States was 252.8 per hundred thousand. It has been stated that more hospital beds are occupied by patients having mental and nervous diseases than by those with all other diseases combined. Now, the question arises: is it possible to prevent entirely, or at least to some extent, this loss to society; or, in other words, are disorders of the mind preventable?

In this discussion the prophylaxis or prevention of disturbances of the mind will be dealt with in a rather concise manner. Only some of the more essential factors will be considered.

It might be stated that the prevention or the cure of any physical disease depends first upon finding the cause and second upon removing it if possible. This same rule, true in the prevention of physical diseases, applies with equal importance to diseases of the mind. If the cause is known it is more nearly possible to ar-

*Read before the York County Medical Society, October 3, 1929.

rive at some definite means of prevention. In certain diseases of the mind, we know definitely the etiology; in some, we have an idea of the cause; and in others we are, frankly, ignorant.

There are many different diseases of the mind. Before considering these we shall refer to feeble mindedness—the idiot, the imbecile, and the moron. The following act as causative factors in the development of such conditions: [3]1. heredity, including alcoholism and any condition bringing about exhaustion in one or both parents; 2. injuries before and during birth; 3. severe illness or injuries early in life.

In regard to prevention of feeble-mindedness, the important question is that of procreation. [3]"Aments are being produced at a rate which can only be described as alarming. This is due in part to the propagation by persons who are themselves mentally deficient, in part to the relatively increased fertility of persons who, whilst not actually aments, are of pronounced psycho-pathis inheritance. The result is to bring about an increasing ratio of the mentally, physically, and socially unfit, which, if unchecked, must not only handicap social progress, but which may hurl the state into the abyss of degeneracy. For it is to be borne in mind that the psycho-pathic do not mate only amongst themselves. They intermarry with the hitherto untainted and normal members of the community, and in so doing constantly drag fresh blood into the vortex of disease. To check this evil, three methods have been proposed: (1) sterilization; (2) compulsory segregation during the reproductive age; and (3) the regulation of marriage."

It is also possible that by preventing injuries before and during birth, and severe illness and injuries early in life, the production of aments may be checked. The condition also might be improved by proper education of the public and by improving the environment in which the child has to live, and also by giving him proper training.

The feeble-minded having been considered briefly, we shall now take up for discussion the psychoses which are most prevalent. The classification, adopted and used by most hospitals in the United States caring for the mentally ill, divides mental disorders into 22 groups. Of these some are preventable, some only partly so and others not at all. The following conditions can be prevented, if not entirely, at least to a certain extent: psychosis with pellagra, dementia precox, the various types of the manic-depressive group, paresis, certain types of the psychoneurotic group, alcoholic psychosis, traumatic, psychosis with cerebral syphilis, psychosis with cerebral arteriosclerosis, psychosis with other somatic diseases, psychosis due to drugs and other exogenous toxins and psychosis with constitutional psychopathic inferiority. Time will not permit our taking up the various groups. Those most frequently encountered in state hospitals will be considered. In the United States dementia precox leads the list, the same being true for South Carolina, with the exception of the year 1928. [1]Of the twelve hundred and seventy-four patients admitted that year one hundred and ninety-six were diagnosed as having psychosis with pellagra; one hundred and seventy-eight, dementia precox; and one hundred and fifteen, manic-depressive.

1. Psychosis with pellagra is the first condition to be considered. The following are the characteristic symptoms from a physical standpoint. The patients usually complain of indigestion, a burning sensation in the stomach and constipation alternating with diarrhoea. Also a complaint is made of a burning of the hands and feet, which later become inflamed and sore and pigmented. Frequently the exposed surface of the skin desquamates. Mentally the patients develop a delirium, may have periods of confusion, episodes of excitement; or, on the other hand, they may be depressed. As the disease progresses the patients develop in the latter stages a central neuritis. Pellagra results from a deficiency of the diet which may be quantitative or qualitative, or as a result of an inability of the individuals to properly mentabolize their food.

Case 1. White male, aged twenty-five, very much undernourished, with sore mouth, skin manifestations characteristic of pellagra and with a history of having had the disease for over a year, was admitted to the State Hospital. Upon admission, he was very weak and confused. He was given proper treatment, which included hygienic measures, rest in bed, and diet. He soon began to improve and in a

few months' time gained thirty pounds in weight, became clear mentally and was able to leave the institution.

2. Schizophrenia. This disorder usually develops early in life during puberty and adolescence. Some of the characteristic symptoms are as follows: there is an abnormal development of the mental make-up; these individuals are of a shut-in type; they are somewhat secluse and there is marked discrepancy between thought and emotional reaction. Often they are silly and their judgment is defective. They are usually suspicious and develop ideas of reference. They often present emotional deterioration. It is claimed by some authorities that heredity plays an important part as a causative factor. The following conditions are some of the contributing causes: severe physical illness, disappointment, death or illness of near relatives, financial reverses, alcohol, etc. To illustrate:

Case 2. White female, single, age 18, education, two years in high school. Family history: one paternal aunt died in the asylum; otherwise, family history negative. Personal history: Measles and whooping cough when a child. History of trouble: since age of ten, she has had several spells of malarial fever which were followed by mental upsets. In November 1921, February 1922, November 1924, and July 1928, according to the history, she showed marked symptoms of mental disorders. At times she is excited; on other occasions, depressed, becomes untidy. There is a tendency on her part to be suicidal and homicidal. She does not sleep well, is irregular in eating, talks irrationally, occasionally becomes dull, listless and refuses to talk. She has to be watched closely because of a tendency to wander away, and requires the constant care and attention of a nurse to bathe and dress her. Frequently she will stand for hours and gaze in one direction, while at other times she cries a great deal. She has hallucinations of hearing, an example of which she describes: "God spoke to me and gave me the art to paint." Her knowledge does not equal her advantages in life. Physical examination, negative.

In preventing dementia precox, it is important in order to obtain the best results, to start with the child. Children with a peculiar mental makeup, shut-in type and queer personalities, have a tendency, it is stated, to develop this condition later in life. An understanding of the child, proper training and environment and inculcating a right attitude towards life until adult age is reached, are necessary.

3. The manic-depressive group. The types are as follows: manic, depressive and circular. These terms are indicative of the types. The causes are not exactly known, but in the majority of cases, it seems that heredity plays some part. The following may precipitate the trouble: over-work mentally or physically, physical illness, shock, worry, disappointments, alcohol, and exhaustive conditions.

Case 3. The depressed type. White female, age 29. As for family, one sister had a similar trouble. She has a grammar-school education. Occupation: housewife. Married at the age of sixteen. Has had seven children; six living. Never seriously ill—only measles and diphtheria when a child. During the last two years has had two attacks of depression. In October, 1928 she had an operation, shortly after which she became markedly depressed. At times has had suicidal tendency. She continually worries about herself, wrings her hands and is often seen crying. She realizes that she has mental trouble and her judgment seems to be fair. Physical examination: nothing abnormal noted.

The first requisite looking toward the prevention of this trouble is the avoidance of fatigue. To quote: [4]"Mental health comes out of right living. Our bodies are too filled with purposeless movement and hurry. We demand no time for deliberation and contemplation, and for opportunity to live with our meditations."

Not only should we recognize fatigue and avoid it, but we should also learn to give due consideration to proper hygienic conditions in general, including a well-balanced diet and a suitable environment, and in case of children. early training so as to enable them to adapt themselves to their surroundings when they grow up. In preventing recurring attacks in adults, psycho-therapy and psychoanalysis are of prime importance.

4. General paralysis. This is a chronic or-

ganic disease of the brain which is characterized by a progressive deterioration of both mind and body. The etiology is syphilis.

Case 4. White male, age 35. Family history, negative. Personal history: no serious illness in his life. He gave a history of venereal infection while a student in college. Married; two children living, none dead. Duration of trouble, two years. This case presented the cardinal symptoms, both physically and mentally, of the disease: pupillary disturbance, speech defect, disturbance of all reflexes, muscular weakness; and, mentally, defective judgment, grandiose idease, and, at times, episodes of excitement. Laboratory findings: blood and spinal fluid gave a positive Wassermann reaction. There was an increase in the cell count of the spinal fluid and a positive paretic colloidal gold curve.

Prevention may be brought about by: (1) the establishment of clinics where individuals may receive proper treatment, care and advice in the early stages of venereal infection; (2) by proper education of the public; (3) by recognizing the importance of reporting all venereal diseases to the state board of health.

5. The alcoholic psychoses. Mental disorders often occur as the result of the excessive use of alcoholics. The most frequently seen are the following: (1) delirium tremens, (2) pathological intoxication, (3) acute and chronic hallucinosis, (4) acute and chronic paranoid states and, (5) alcoholic deterioration.

Case 5. Delirium tremens. White male, age 30. Family history, negative. Personal history: flnished high school; occupation, farmer; health has always been good, having had only the diseases of childhood; single. Gives a history of using tobacco and alcoholics to excess. "Just before I got upset I would drink two and three quarts of whiskey a day." Duration of trouble—about four days before admission to hospital. At first unable to sleep well, was untidy, became noisy and excited, was homicidal, developed illusions and hallucinations, was irritable. Complained of negroes coming into his room—could hear them talking, thought they were coming to do him bodily harm. While at home he procured an axe at night and knocked out several windows in an effort to strike the negroes he imagined were coming in. Physical condition good.

How shall this condition be prevented? (1) By restriction or suppression of alcoholics by law. In the United States we have the Eighteenth Amendment. (2) By the education of the public concerning the evil results following the use of alcohol. (3) Of greatest value is the observance of abstinence.

6. Psychosis due to drugs and other exogenous toxins. This group includes those mental disorders arising from the over-use of heroin, opium and its derivatives, bromides, chloral, metals such as arsenic and lead, and various gases. Those affected become confused, delirious, and at times noisy and excited. Frequently they develop hallucinations and paranoid trends, and if they take drugs for long periods they often become deteriorated mentally.

Case 6. The following case resulted from the excessive use of morphine sulphate, bromides and chloral. White male, age 22. Family history, negative. Personal history: health has always been good except for attacks of asthma since age of three, which he states are the cause of his using the drug. He is single, has no special occupation. He gives a history of using morphine for many years off and on. Just before admission to the hospital, he was taking five grains a day. Upon admission, he had wounds on both arms which were self-inflicted in an attempt to commit suicide. He appeared to be somewhat confused, refused to stay in bed, was agitated, and at times appeared to be depressed, complained of alligators and elephants biting him on the leg. Physically, he was well developed and fairly well nourished. Examination of chest: moderate bronchial asthma. Blood pressure: systolic 152; diastolic, 94.

In the prevention of such disorders, (1) the restriction of drugs is desirable. From a legal standpoint, this is cared for by the Harrison Narcotic Law. (2) Those upon whom devolves the duty of giving drugs should receive instruction in their proper use and administration. They should be familiar with the possibility of developing a drug-addict by such administration. The greatest precaution should be taken in giving narcotic drugs because of their habit-forming tendency. They should

only be given when absolutely necessary, and, if possible, without the patient's knowing what he is taking.

7. Psychosis with somatic disease. The mental disorders in this group depend entirely upon some physical condition, or rather, some somatic disease for their origin. At times the patients become confused and often are delirious as the result of some infectious disease or exhaustion or some form of toxemia.

Case 7. White male, age 40. Family history, negative, with the exception of two sisters' being drug addicts. Patient has a grammar school education; occupation, painter; married; six children living, none dead; never sustained any severe injuries, and only serious illness he ever had was small-pox years ago. He gives a history of using alcoholics to excess up to about a year ago, and has been troubled with nervousness for several months. He is troubled with insomnia; very nervous. Has the idea that he is going to die soon and wants someone to be with him all the time. Complains of having a poor appetite and is afraid of being poisoned by someone. He also complains of being persecuted. The patient often seems depressed, he is untidy and frequenlty becomes agitated; worries a great deal about trivial matters. He admits hallucinations and delusions. Physical examination—pumonary tuberculosis and cardio-renal disease. He is five feet six and a half inches in height and weighs ninety-eight pounds. Feet and ankles edematous. He has a left inguinal hernia.

The prevention of mental disorders due to physical disease depends entirely upon being able to improve the physical condition and, if possible, to remove the cause of the trouble.

8. The psychoneuroses and neuroses. The following are the types: hysterical, neurasthenic, psychasthenic anxiety and mixed type.

Case 8. Illustrating the neurasthenic type. White male, age 42. Family history, negative. Personal history: occupation, farmer; grammar school education; married three times; first two wives dead; three children living and well. Gives a history of having rheumatism some years ago, and dysentery in 1928. He complains of feeling foolish in his head, nervousness, pains in the back of the head. States he gets irritable. Is not able to work. Duration of trouble, seven years. He stated that in 1928 he was unconscious for two weeks, that he was paralyzed, that his arms were over his chest and could not be moved. Complains of getting numb, of having pains in his stomach and back which shoot up to his head. He has various other complaints to make. Upon physical examination he was found well-developed and well nourished. Physical basis for his many complaints could not be found.

Methods of prevention include proper education and training of the child and improving the environment. Psychotherapy and psychoanalysis are of prime importance in handling these cases. Success in overcoming the obstacles in the path of those inclined toward the psycho-neuroses depends largely upon one's ability in helping the individuals to adapt themselves to their environment.

The following mental disorders—traumatic psychosis, involution melancholia, paranoia and epileptic psychoses—can in some cases be prevented if proper methods are taken. In regard to the other mental conditions which have been enumerated we know very little concerning their etiology and very little that can be definitely done to prevent their occurrence.

Summary: 1. The prevention of mental disorders depends upon the early recognition of mental manifestations and the institution of proper hygienic measures. 2. The child must be protected from injuries before, during, and after birth. Also injuries and severe illness during early childhood are to be guarded against. 3. Proper training, a suitable environment, not only in the home but also at school, must be provided. 4. In order that the child may be born well—a right of every one brought into this world—there should be an assurance of good heredity, and then not only will the constitutional mental disorders be reduced but also those developing on the basis of alcohol, syphilis, etc.

Mental health can be had if we are willing to pay the price. To quote: [5]"Mental health is purchaseable. The prevalence of mental disorders can be reduced for coming generations with the aid of dollars and cents spent for segregation in this generation."

In order that a proper program may be car-

ried out, certain means are necessary. Clinics which are well-equipped should be established where proper treatment, care and advice can be given. The examination of all children in schools is to be recommended, mental hygienic measures instituted, and the epileptic and the low grade mental defectives should be transferred to institutions, and intensive war should be waged against alcohol and syphilis. Finally, if this program is properly carried out, by the time the next generation arrives there will be a great reduction in feeble-mindedness. General paralysis, mental disorders due to alcohol and drugs, pellagra, and cerebro-spinal syphilis can be prevented; the group of manic-depressive psychoses can be reduced to a certain extent; and possibly some cases of the dementia precox group obviated.

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LYE BURN OF ESOPHAGUS IN INFANT, FOLLOWED BY STRICTURE

By E. W. Carpenter, M.D., Greenville, S. C.

Emma Lee Bowen—2-½ Years

Admitted to the hospital for treatment of lye burn of the esophagus on May 13, 1929. Kept under observation short time and discharged.

Re-admitted August 28, 1929 on our service. Weight about 12 lbs., perfect skeleton, cold and only signs of life was heart sounds with stethescope. Case turned over to surgical department who filled abdomen with glucose and normal salt solution and applied heat. The next day a gastrotomy was done and feeding tube inserted.

A week after this esophagoscopy was done, the last three inches of the esophagus was found to be ulcerated, badly discolored, swollen much food debris present and considerable dilatation, nothing but a filiform bougie could be passed through the stricture at the bottom of the dilatation.

The esophagus was cleaned out and nothing but water and argyrol allowed by mouth. A week later a ligature on a filliform bougie was passed through the esophagus into the stomach, a small scope was inserted into the stomach through the abdominal opening and the ligature withdrawn. Thus giving a complete loup Gradually increasing size of knots on the string were drawn through the stricture then small olives were threaded on the ligature and drawn through the stricture until now an olive 6 m.m. in diameter can be made to pass with very slight resistance. The child's weight is now 26 pounds and she is taking fluids by mouth. Whooping cough was contracted two weeks ago and this has slowed up the progress of the case.

Similar cases should not be discharged after primary admission to the hospital until the esophagus has been studied and the degree of stricture determined. It is much easier to keep the esophageal lumen open as healing occurs, than to dilate a firm stricture later.

Dilatation should be done very cautiously as very slight force is required to split the walls of the stricture once the muscular coat of the esophagus has been destroyed.

Dilation will have to be continued for several years. We believe that in severe cases, a ligature passed through a gastrotomy fistulo and threaded with metal olives of increasing size is perhaps the best all round method of treating these cases.

*Read before the South Carolina Pediatric Society, Columbia, S. C., January 14, 1930.

TRIBUTE TO THE MEMORIES OF DRS. CHARLES L. MINOR AND Wm. LEROY DUNN*

By J. W. Jervey, M.D., Greenville, S. C.

But this is my one and only chance to pay a tribute that I greatly wish to pay to the memory of two of your members whose stars have gone westward forever, beyond the horizon of your majestic Pisgah and its beautiful blue foothills, since my last visit to you. I loved them both, as most, if not all, of you did, and deeply admired their high incorruptible characters, their striving devotion to lofty ideals, as well as the brilliant prominence of their intellectual endowments. In their high and unwavering aim toward the beneficient uplift of humanity and the medical profession they were as one; in personal characteristics, habits, methods and manners, they were as widely separated as the poles; yet each, in his own way, endeared himself to countless friends and colleagues.

I am speaking, as you know, of Charles L. Minor and Wm. Leroy Dunn. It is not my privilege, and it is not expected of me, to depict here their lives and activities. You are more familiar with them than I; but in paying my slight tribute to their worth as citizens and doctors of medicine I want to call one thing especially to your attention. That they were both outstanding men and leaders in the profession, not only here, but in a national sense, we will all agree, and their lives proved the length, breadth and depth of their merits and their minds. Living and practicing at the same time in a small city it must have been inevitable that petty annoyances should arise as though springing up between them; from incorrect quotations from one to the other by careless or ignorant or designing patients or friends; from various incidents in the course of daily practice; and even perhaps from misunderstandings in personal argument or debate between themselves. Yet never did public or profession hear of friction or dissatisfaction between them, and knowing them as well as I did I never heard one say an unkind or disagreeable word about the other. Truly they warmed their hands at the kindly fireside of life, and their hearts in the sunshine of their friends' and colleagues' love and admiration.

I think no more splendid or inspiring picture could be pointed to than these two outstanding men and leaders, contemporaries and profession competitors, living their lives in mutual friendship, respect and regard each for the other's attainments. Surely they have been an inspiration to the men of the Buncombe County Medical Society.

As only an outsider looking in, of course, I visualize your membership as being largely free from that small-town bickering, backbiting and clique-forming which is the bane of so many of our medical organizations. You seem, for the most part, to like, respect and enjoy each other; and it may well be hoped that the future holds for you here the development of quality as lovable, loyal, and commanding leaders as those you have so lately lost—Charles L. Minor and Wm. Leroy Dunn!

*Part of the address read before the Buncombe County Medical Society, Asheville, N. C., December 16, 1929.

NASAL SINUS INFECTION*

Wm. B. McWhorter, B.Sc., M.D., F.A.C.S., Anderson, S. C.

I will speak briefly of nasal sinus infection as we find it in South Carolina calling special attention to classification, symptoms and principles of treatment. The x-ray photographs shown will illustrate the different stages of the infection and were made from private patients some of whom were later operated on, thus allowing opportunity to compare x-ray and operative findings.

Classification.—If we read the literature dealing with nasal sinus disease we will find various classifications which are confusing. For instance we find such terms as acute catarrhal sinusitis, acute suppurative sinusitis, chronic catarrhal sinusitis, chronic suppurative sinusitis, empyema, chronic hyperplastic sinusitis, etc. Such terms really mean nothing definite and serve to confuse rather than clarify the situation. As a matter of fact there are no

*Read before the Anderson County Medical Society, November, 1929.

clear cut arbitrary divisions. The different stages overlap and all differences of pathology can be explained according to the degree of inflammation and the length of time it has existed.

Etiology.—What is the cause of these inflammations of the nasal cavities?—The reply is that in the light of our present knowledge it appears that practically all are of bacterial origin. They are infections. I wish to state incidentally that our system of modern medicine rests largely upon the germ theory as a cause of disease. Both the physician and the surgeon are dealing largely with infection and the immediate and remote results of infection. Unless we bear this truth in mind the diagnosis and treatment of disease we have no scientific foundation upon which to stand.

As elsewhere in the body there are of course both general and local conditions which predispose the nasal sinuses to infection. These same conditions unless relieved will cause acute infections to persist and become chronic. Any constitutional condition which lowers resistance renders the nasal mucous membranes more susceptible to infection. Local conditions within the nose which interfere with free ventilation and drainage predispose to infection and favor its persistence. Congenitally narrow nasal passages, deviated nasal septa, swollen or deformed turbinates, diseased tonsils, adenoids and teeth are some of the local conditions which invite infection of the sinuses and prolong it whenever it exists.

Pathology.—The nasal sinuses are lined with mucous membrane continuous with that of the nasal cavity. Inflammation of the mucous membranes of the sinuses obeys the same laws as inflammation of mucous membranes elsewhere in the body. In the early stages there is swelling and edema of the epithelium. There is dilatation of vessels and infiltration with serum and leucocytes. As a consequence there is more or less thickening of the membranes. An x-ray photograph made at this stage (the first stage of inflammation usually called acute catarrhal) will show a *slight and uniform capacity of the involved sinuses*. The maxillaries and anterior ethmoids show this decreased penetration of the rays in every severe cold. The frontals and posterior ethmoids are not so often involved. In the great majority of cases the infection does not progress beyond this stage. When the inflammation subsides the mucous membrane returns to normal and no longer show any capacity on the x-ray film.

If the resistance of the patient is low, however, or the infection is of virulent type or there is not adequate drainage, instead of subsiding the inflammation will progress to the next stage and pus will form in the sinuses. We will have what is usually called *acute suppurative sinusitis*. The mucosa will show more thickening than in the first stage and due to this thickening and also to the presence of pus an x-ray photograph will show a dense uniform opacity of the involved sinuses. This most often occurs in the maxillaries, anterior ethmoids and frontals and rarely in the posterior cavities. Nevertheless, if adequate drainage is provided even at this stage and the contributing causes removed the inflammation will subside and in course of time the sinus membraens will return to normal.

If, however, predisposing causes are not removed recurring acute attacks will bring about permanent pathological changes within the sinus cavities. These changes induce a chain of symptoms referred to as *chronic catarrhal sinusitis* or *chronic suppurative sinusitis*. The term hyperplastic is sometimes applied to the former and empyema to the latter. In the so-called catarrhal or hyperplastic form there is little pus while in the suppurative form there is much pus. The characteristic pathological change in both forms, however, is a thickening of the mucous membranes often accompanied by the formation of polypoid tissue within the sinuses and sometimes bone necrosis. An x-ray photograph of the catarrhal or hyperlastic type will show more or less opacity depending upon the amount of thickening of the membranes. An x-ray photograph of suppurative type will show dense uniform opacity due to thickening of membranes and also presence of pus. Chronic sinusitis is often unrecognized by the profession and frequently leads to symptoms remote from the nasal cavities.

Symptoms.—The symptoms of the acute forms of sinusitis are so well known that I will not take time to speak of them. I do wish to call attention to some of the symptoms of which

a patient may complain in the chronic forms of sinusitis. If a patient complains of a chronic headache and a nasal discharge we will of course at once think of a possible sinusitis. He may have no such complaint, however, but may complain of pain in the fact due to a trigeminal neuritis. He may complain of tinnitus and impaired hearing due to a chronic otitis media. He may complain of impaired vision due to optic neuritis. He may have a chronic granular pharyngitis with frequent clearing of mucus. He may have a laryngitis with hoarseness or a bronchitis with cough. He may have an asthma, an arthritis or any constitutional condition that can be caused by focal infection. I have seen a number of cases of chronic fever, cough and asthma in children due to maxillary sinus infection. No patient with any of the complaints mentioned has had a thorough examination until the nasal sinuses have been investigated.

Treatment: The cardinal principles of treatment in the acute forms of sinusitis are to provide adequate *ventilation and drainage*. If this can be successfully done without surgery then of course no surgery should be done. However, if local conditions are such that medicines are of no avail then some form of surgical proceedure is indicated. Pus must be evacuated to give the patient relief from pain and to prevent complications. In the chronic forms of sinusitis, if the patient is to be relieved of his symptoms and the disease cured, there must be not only permanent ventilation and drainage provided but there must also be removal of local predisposing causes and *removal of the diseased tissue from the sinuses*. An antrum full of pyogenic membranes and polypi can not be cured by pushing a trocar into it and washing it out. Just as well attempt to cure a gall bladder full of pus, granulation tissue and stones by such proceedure. Fortunately diseased tissues requiring removal occur most often in the maxillaries, occasionally in the ethmoids and but rarely in the other cavities. When necessary such removal may usually be done under a local anaesthetic and for one skilled in the work it is neither a difficult nor a dangerous proceedure. Nature will replace the removed tissues with new mucous membrane in due course of time. If x-ray photographs are made after healing has taken place the sinuses will appear normal except for slight opacity due to fibrosis.

"SODOKU"

By G. P. Neel, M.D., Greenwood, S. C.

A negro boy six years of age presented a sore on the right index finger.—A sore with the appearance of a severe infection—with lymphatic involvement to and including the axilla. He had a rash over the body. After so long a time we got from his family the history of the bite of a rodent three weeks before he was seen, two weeks before the sore appeared or the finger showed signs of infection. The initial wound or sore from the bite healed and the breaking down appeared two weeks after the bite. He presented no other signs of the disease as fever, great prostration, delirium, headache, nausea, and vomiting.

This case was reported to our county society a year ago, since which time four other cases have been found in Greenwood county. The disease must be much more common than is usually thought. I have read and heard of people dying from a rat or bite of some rodent all of my life. I have seen in the newspapers accounts of a dozen cases of people suffering from rat bite since I ran across my case.

It must be that physicians have failed to recognize the condition as a clinical entity. This is my reason for publishing this report of the one case I have seen.

The diagnosis should be easy. History of rodent bite, healing, the breaking down two to six weeks later, lymphatic involvement, rash, fever relapsing incharacter, prostration, headache, delirium, nausea and vomiting.

The arsenicals readily effect a cure.

MASTOIDITIS, LATERAL SINUS THROMBOSIS, SEPTICEMIA AND MENINGITIS WITH RECOVERY

William H. Prioleau, M.D.
and
Edward F. Parker, M.D.

The following case which is reported because recovery is unusual in similar cases occurred at the Baker Sanitorium in the practice of Dr. Edward F. Parker, Dr. Joseph Maybank and Dr. William H. Prioleau being associated as medical and surgical consultants.

The patient, John M., Jr., was white, about twenty-one and in good health. December 14, 1929 he had Influenza December 23rd he had a severe pain in his right ear. Examination revealed a swollen canal, the drum membrane being difficult to see. The tentative diagnosis was furunculosis: subsequently there was a discharge indicating an acute suppurative otitis media. January 10, 1929 he was symptom free and returned to work. January 20th he had a sudden rise in temperature and pain in the right ear. Examination, laboratory and X-ray work pointed to an operative mastoiditis.

January 25th the simple mastoid operation was performed. The cells were partly necrotic and contained pus. Convalescence was uneventful except for a persistent slight elevation of temperature. February 3rd the day before his anticipated discharge from the hospital, he had a chill and a rise of temperature to 103.6, pulse 62. The blood culture was positive for streptococcus hemolyticus. Though the inference was that the seat of the infection was in the mastoid region the wound appeared to be in good condition and there were no local signs or symptoms of lateral sinus involvement. In spite of this, diagnosis of probable lateral sinus infection was made.

February 4th—Ligation of right internal jugular vein—transfusion of 160 cc of whole blood. Transfusions also on February 6th and 8th. At this time he developed severe headaches and rigidity of the neck with limitation of anterior flexion. The blood culture was still positive. As the patient was not improving it was decided to explore the lateral sinus.

February 9th—Operation upon the right sigmoid sinus—the walls were very thick and tough; there was practically no lumen. The operation was carried superiorly and inferiorly until there was free bleeding and normal wall tissue encountered. The patient was then transfused. A spinal puncture was done but the fluid was too bloody for a satisfactory examination.

February 12th—Temperature still greatly elevated, opisthotonous increased. There was a general inflammation of the deep tissues of the right side of the neck and a small amount of purulent discharge from the neck incision. The blood culture was still positive, though the organisms were fewer.

February 14th—Marked diplopia—Right abducens paralysis—opisthotonous of same degree. Temperature reaches 104—W. B. C. 18,900, small transfusion.

February 15th—Following the last two transfusions the patient had a rise of temperature so it was decided to discontinue them for the time being.

February 16-22—Temperature 98 to 104 but gradually reaching lower peaks. Less induration of neck. Diplopia the same.

February 23rd—Mild degree of right facial paralysis—neck much less indurated. Diplopia and opisthotonous the same. Mentally much brighter.

March 2nd—Temperature normal—Pain in right shoulder.

March 8th—Discharged from hospital.

June, 1929—General health good. All symptoms have disappeared—no diplopia, facial paralysis or headache.

Judging from the appearance of the tissues the lateral sinus infection was not a recent process but had existed probably from the time of the surgical mastoiditis. In spite of this it manifested itself by no local symptoms; the elevation of temperature and blood stream infection being the only evidence of its presence.

The treatment consisted of ligation of the internal jugular vein so as to prevent to a great extent the entrance of organisms into the blood stream, and to favor localization of the infection. Later, the infected area was drained. The feature of the systemic treatment was repeated small blood transfusions which seem very effective in combating a blood stream infection.

While the spinal fluid was not cultured the diagnosis of Meningitis seems justified by the opisthotonous, right abducens and facial nerve paralysis.

EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M. D., F. A. C. S., CHARLESTON, S. C.

OPTHALMOSCOPIC SIGNS OF DISEASE OF THE HEART

Yeager and Wagener
American Journal of Medical Science, July, 1929

Arterial hypertension is a frequent cause of heart disease.

There may be retinal signs of hypertension, even though there be normal blood pressure at the time.

The opthalmoscope may be used in differentiating the hypertension, and the arteriosclerotic types of heart disease.

There are two types of retinal arteriosclerosis associated with heart disease, the hypertension type and the senile type. We also find retinitis of benign and malignant hypertension in cardiac disease and when present it warrants a more serious prognosis than retinal arteriosclerosis alone.

Retinal petechiae and embolic lesions may be found in cases of subacute bacterial endocarditis. In subacute bacterial endocarditis are round hemorrhages with small yellow-white center but there may be other types as flame-shaped preivascular and subhyaloid.

Certain grayish-white patches in retina and choroid are embolic ischemic lesions.

Conclusions

About 96% of patients with heart disease due to hypertension alone show retinal arteriosclerosis of hypertension.

About 92% of cases of heart disease due mainly to coronary sclerosis have retinal arteriosclerosis of either hypertension or senile type.

Therefore in any case of heart disease in which there is retinal arteriosclerosis of hypertension of senile type, hypertension or coronary sclerosis may be of importance in reference to the cardiac failure. Conversely, in any case of heart disease in which retinal arteriosclerosis is not present the heart disease is usually not due to either hypertension or coronary sclerosis.

If a patient with cardiac disease and hypertension and without evidence of toxic goiter or endocarditis, has retinal arteriosclerosis of the senile type, he probably has coronary sclerosis of severe degree.

The presence of retinitis, of benign or malignant hypertension type, in heart disease indicates severe arteriolar disease due to hypertension and warrants a more serious prognosis than the same grade of retinal arteriosclerosis alone.

Opthalmoscopic examinations yields negative results in cases of heart dises unless the hear disease is due to or associated with hypertension or coronary sclerosis or subacute bacterial endocarditis.

In subacute bacterial endocarditis the presence of embolic lesions or petechiae in the retina is practically pathognomonic.

At the Roper Hospital, Charleston, S. C., we are trying to correlate the heart cases on the basis of whether or no there is a hypertension or coronary sclerosis as revealed by opthalmoscopic examination.

The hemorrhages with white centers are like those that are characteristic of pernicious enemia.

SOCIETY REPORTS

ANNUAL REPORT OF STATE BOARD OF HEALTH SOUTH CAROLINA

By James A. Hayne, M.D., State Health Officer, Columbia, S. C.

This is the fiftieth annual report of the Executive Committee of the State Board of Health, and is for the year ending December 31, 1929.

This report is made in compliance with the Concurrent Resolution, which directs that every officer of the departments of the State government required by law to make a report to the General Assembly shall contain only concise statements of recommendations and of the transactions of the officer of the department; and that no copy of any report or document, or law, or proposed measure shall be made and printed at the expense of the State except what shall be absolutely necessary for the information of the General Assembly.

Executive Committee State Board of Health

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George W. Dick, D.D.S. _____ Sumter
J. Lee Carpenter, Ph.G. _____ Greenville
(Vice Sam. C. Hodges, Ph.G., resigned)
Jno. M. Daniel, Attorney-General ____ Columbia
A. J. Beattie, Comptroller-General ____ Columbia
James A. Hayne, M.D.,
Secretary and State Health Officer __ Columbia

Staff of South Carolina Department of Health

James A. Hayne, M.D., Executive Officer of State Board of Health.

A. H. Hayden, M.D., Epidemiologist.

R. G. Hamilton, M.D., Malariologist.

Mrs. L. L. Cain, Field Secretary, South Carolina Sanatorium .

Mrs. Chas. L. Sligh, Bookkeeper.

W. M. Riser, Secretary to Dr. Hayne.

Elizabeth Rivers, Clerk.

Board's Quarters

The wisdom of the legislature in building an office building for the housing of all State departments is demonstrated more and more as we occupy these offices. The fact that each department can immediately get in touch with any other department of the State government facilities State work and prevents the overlapping of work.

Miscellaneous

Four regular meetings of the Executive Committee of the State Board of Health were held during the year—March 19, May 7, August 6 and October 15, respectively. The Building Committee met on August 27, September 27 and December 23, respectively. The Budget Committee met on October 16 and 17. The Minutes of these meetings are found elsewhere in this volume. The Executive Committee of the State Board of Health at its meeting on May 7, re-elected Dr. Robert Wilson Chairman and Dr. James A. Hayne Secretary of the Board.

South Carolina Sanatoria

The report of Dr. Ernest Cooper, Superintendent of the Sanatoria, is found elsewhere in this volume and it shows that there were resident at the Sanatoria on December 31, 209 patients—61 white men, 87 white women, 19 white boys, 18 white girls, 11 negro men and 13 negro women. Total number of beds, 214. They have five vacancies. This report shows that there was out patient work done throught the State in which there were 505 examinations made. 175 of this number were found to have pulmonary tuberculosis. The cost to the State for the care of the patients at the Sanatorium for 1929 was $1.55 per patient per day. This includes all expenses, salaries of physicians and nurses, medical supplies, food, deterioration of buildings, repairs, etc., and this is the lowest per capita cost of any tuberculosis hospital of which we have records.

Attached to Dr. Cooper's report is the report of the Field Secretary, which will be of interest and should be read with eare by the General Assembly because it goes into detail as to how patients are admitted to the Sanatorium and why there is such great need for more beds at the Sanatorium.

Hygienic Laboratory

The Hygienic Laboratory shows in six years an increase of 177.7 per cent in the number of tests made, 109.8 per cent in the number of antirabic patients treated, an increase of 44 per cent in the amount of typhoid bacterin sent out, and an increase in appropriation of only 13.3 per cent. It is impossible for this Laboratory to properly function and do the work that is necessary for the people of this State such as making tests for undulant fever, which is becoming prevalent in this State through the infection of cattle, to do the antimeningococcic tests of contacts, to give

antirabic treatment to over 1,000 people, and to generally carry out the work of the Laboratory with the personnel that is there. This personnel is underpaid as compared with other laboratoris; they are on the work days, nights, holidays, and is always open to the public. The personnel of the Laboratory is subject to call at any hour of the night. We have asked for $14,950 for the Laboratory for 1930. This is an increase of $1,-910 over the actual expenditures of 1929. We feel that unless something is done in regard to the salary of the Director of this Laboratory we may find ourselves without a Laboratory Director and unable to employ one for the amount provided by the Legislature. A central laboratory is maintained in nearly every State in the Union and their value to the public is untold. Our Laboratory cannot be run on the basis of the present appropriation. We therefor respectfully request that attention be given to our request for a proper remuneration for the personnel of the Laboratory and an increase of Laboratory facilities.

Bureau of Vital Statistics

The work of registering births and deaths in this State is still being properly carried out through the zeal of Mr. C. W. Miller, the head of this Bureau, with the able assistance of the underpaid personnel with him. As stated in the last annual report, we are in the registration area for births and deaths and we must stay there if our figures are to be accepted by other States as being official. We therefore urgently petition that the request of this department for increased appropriations be carefully considered by the legislature.

In looking over the reports of deaths we find some striking figures. In 1928 there were 208 people killed in automobile accidents during the last months, whereas in 1921 there were 301 people killed in 11 months, which is an increase of 33-1/3 per cent in the number of accidents. We also find an increased death rate from acute alcoholism from 33 to 38, in spite of the Volstead Act and the endeavors of the Federal and State authorities to stop the drinking of whiskey. Acute poisoning from alcohol, resulting in brain symptoms, neuritis, and other grace disorders are rapidly on the increase, due to the use of improperly distilled so-called "sugar-corn" fluids, in which there are various others which are poisonous, and fusel oil which is also poisonous. These poisons can only be eliminated by a proper distillation. This cannot be done on the banks of a creek by a pine torch, and the constant fear of interruption. But this fluid is commonly sold in South Carolina and is causing a great number of cases of acute alcohol poisoning. Diphtheria shows a smaller number of deaths for 1929 than for 1928. Malaria shows an increase from 337 in 1928 to 344 for the first 11 months of 1929, and the difficulty is that it has appeared in places in which we never had had reports of malaria before, such as Laurens county and parts of Spartanburg county. There has been an alarming amount of blackwater or hemorrhagic fever in certain counties of the State during the year, causing death. The report of Dr. R. G. Hamilton, Malariologist, will be found in this volume. We are glad to report that pellagra, in spite of starting off with a big increase over last year in deaths,, shows for this year 844 deaths for the first 11 months of the year against 937 in 1928. We think that when the December report comes in we will show a less number of deaths than for the preceding year. We believe this has been largely due to the campaign of education carried on through the County Health Departments, through the Farm and Home Demonstration Agents as to nutrition, through educational talks made by the staff of the State Board of Health including the State Health Officer, and by the sending out of 134,000 pounds of Brewers yeast in 1929, besides a great deal that was sent out by the County Health Departments. We hope we have reached the apex in the death rate from pellagra in this State. We are glad to state there were no deaths from smallpox in the State for the first 11 months of the year. Deaths from tuberculosis in cases attended by doctors were 988 in 1928 and 988 for the first 11 months of 1929: those unattended by doctors show 237 in 1928 and 165 for the first 11 months in 1929. So our death rate from tuberculosis continues to fall. We have a State death rate among whites of about 37 per 100,000 population, which is one of the lowest death rates of whites in the United States. The negro death rate, however, is high. The typhoid fever death rate for 1928 was 305, against 235 for 1929. We are glad to report we are being successful in our attempt to rid the State of typhoid fever, the reduction for the year being exceedingly gratifying. One of the most satisfactory reports that we have is that of infant mortality, which in 1928 showed 3721 deaths and in 1929 showed 3,184 —a decrease of 537 deaths, or 14 per cent. We believe this decrease is largely due to the efforts made under the Sheppard-Towner Act for the protection of maternity and infancy, and that the work done for the past seven years in the Bureau of Child Hygiene, which was a campaign of education, is just commencing to show results. We have in 1929 the report of one death from undulant fever. This disease is a disease of cattle due to the bacillus abortus which affects cattle and when the milk is used the human being becomes infected. It is a dangerous and lingering disease and difficult to cure. The only safety that people have is in using properly sterilized milk. The carriers of the disease can be easily isolated from the dairy herds and the State Veterinarian, Dr. W. K.

Lewis, has a force at work who are making proper inspections and separating the reactors in the herds; in other words, the cows that show symptoms of being infected with the bacillus abortus.

There has been a decrease in both births and deaths for the year 1929.

The Bureau of Child Hygiene has functioned since July 1, with a very limited personnel, consisting of Miss Nellie Cunningham as Director, Miss Laura Blackburn, Supervisor of Midwives, and Miss Fannie O. Winter, Secretary. The report of Miss Cunningham shows that the follow-up work being done after the tremendous reduction in the personnel due to the cessation of the Sheppard-Towner funds on July 1, well deserves the very small appropriation which the legislature has made for the protection of mothers and infants in South Carolina.

Department of County Health Work

The Department of County Health Work gives a full report of its activities and shows that a great deal of work has been done through the 23 counties of the State that now have County Health Departments. We believe that every county should have a county health officer. If the county is too poor to afford a county health officer it would pay the State in the protection of the health of the people to pay for the county health officer as is done for the school teachers and the home and farm demonstration agents. The recent epidemic of cerebrospinal meningitis has show what can be accomplished in counties where there are county health officers. They allay the panic of the people by showing them that somebody can be responsible and in having the rules and regulations pertaining to communicable disease carried out in a sane manner. If a county cannot have a county health officer it should certainly be able to have a county health nurse for the purpose of inspection of school children and general instruction of the public in sanitary and preventive medicine procedures.

Dental clinics are still being held throughout the State under the Department of County Health Work by Dr. E. A. Early, and his report in this volume shows that a great amount of work has been done.

Control of Epidemic Diseases

The report of the Department for the Control of Epidemic Diseases shows that Dr. A. H. Hayden has made a careful survey of all penal, charitable and educational institution of the State and in this report is shown the needs of all these institutions. The reporting of communicable diseases is also under this department, is being properly carried out, and is of great value in locating where epidemics occur.

Under this department is also listed the $40,000 which is given for the distribution of biologics. This is not enough money to supply the demands of the State for these preventive serums and vaccines, because through the education of the people more and more are demanding that they be given the preventive measures which are known to the medical science.

Department of Sanitary Engineering

An interesting report of this department will be found elsewhere in this volume. Under of the largest undertakings of the year through the Department of Engineering has been the inspection of mills of the State as to whether sewerage could be installed and whether the financial condition of the mills would permit such installation. Mr. Legare', with his assistants, has made a thorough investigation of the mills of the State and such report will be found appended. In addition to this, the sanitary privy law which was passed by the last General Assembly, has been distributed to all incorporated towns of the State. Printed pamphlets containing the rules and regulations regarding sanitary privies have been given to these towns and in a great many instances the towns have complied with these rules. However, there are still a great many towns that have not complied with these rules.

We feel that the work done by the Engineering Department will have to be more liberally supported by the State if they are to carry on. Especially is this true in regard to the purchase of a boat suitable for making oyster inspections and water inspections required by the U. S. Government before oysters can be shipped out of the State. This is a growing industry and it is a positive fact that oysters cannot be shipped out of this State without a certification by the State Health department. Such certification can only be made after examination of the coastal waters to determine whether such waters are polluted or not, and also the examination of oysters taken from their beds. This work is being well carried and the Federal government has accepted our certification up to the present time but has informed us that unless we make these examinations according to the rules and regulations laid down by the Federal government they will not accept our certification. The boat which we got from the Board of Fisheries proved to be of little value as it was too small for the laboratory to be set up on it. It also had four engines and the repair bills on it were very large. It still continued to leak and was pronounced by people who have knowledge of these matters to be dangerous for the use of the employees of the State in the carrying out of the provisions and regulations of the State Board of Health for the inspection of oysters. We therefore, from a letter sent to us by the Budget Commission, purchased a boat which

is satisfactory and in which the work can be properly done. The cost of this boat is $5,000 and we feel that the legislature is in honor bound to make this appropriation and pay for this boat as it was upon express orders of the Budget Commission that the boat was purchased.

State Chemist

The report submitted by Dr. F. L. Parker as State Chemist shows that a careful check is kept on all water used for drinking purposes in corporate towns of South Carolina and gives a great deal of interesting data in regard to each town.

Child Placing Bureau

This Bureau submits an excellent report. We feel that this department is making most praiseworthy efforts to properly place the orphans in this State so that they will be cared for, and this entails a large amount of education. We do feel, however, that this department could work better if it were made a separate department, with the present director at its head, as it is not the function of the State Board of Health. It is sociological work and has nothing to do with the prevention of the spread of disease.

Hotel Inspection

We are glad to say the legislature gave us last year a Hotel Inspector. His work has been well done, it has not cost the State anything, and there is now $135 in the bank to the credit of the State over and above his salary and traveling expenses since his appointment. We have heard no criticism of Mr. Capers' work and only high praise from those who have spoken of him. We feel fortunate in securing Mr. Capers's services. His report is to be found in this volume.

Finally, in submitting this report to the General Assembly, and to His Excellency the Governor, we feel that the work done in 1929 by the State Board of Health of South Carolina was of tremendous value to the people of the State and that the money expended, although apparently large could not have been spent in a way that would have saved the lives of more people and protected the homes of more families than has been done during the past year. A great sanitarian has said that public health is purchasable but a State or a community must be ready to pay the price of its purchase. It is the largest asset that a county, a city or a State can have, viz., a low death rate, a low sickness rate, and a reputation for preventing the spread of communicable and contagious disease.

REGULAR MONTHLY MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY HELD IN THE LECTURE HALL, CITY HOSPITAL, MONDAY, JANUARY 6th, 1930

The meeting was called to order by the President, Dr. Guess at 8:00 P. M. with the following members and guests present:

Drs. Guess, Tyler, Brown, Davis, Carpenter, Hugh Smith, M. C. Smith, Gaston, Richardson, Dendy, Sanders, J. W. Jervey, Jr., Mauldin, Murray, Clegg, Wilkinson, McCalla, J. W. Parker, Grimball, DuPree, Bishop, Frank Lander, Berry, Metz, Pitman, Pollitzer, Wyatt, Kitchen, Brockman, Peeples, Ball, Bruce, J. M. Fewell, Goldsmith and Barksdale.

The minutes of the last meeting were read and approved.

Reports of clinical cases were then called for. Dr. Tyler exhibited and showed five patients as follows: one case of prostatic hypertrophy, one of ruptured duodenal ulcer, one of gastric ulcer, and one of an amputation following a severe ulceration which resulted from a burn of the foot, and one of presumable syphilis of the sternum. Dr. Tyler mentioned that he had used the new Sodium anaesthesia with these patients with good results. Discussed by Drs. Sanders, Hearin, and Wilkinson.

Dr. Davis reported a case of tuberculosis of the kidney, and another case of two kidneys and two ureters on one side.

Dr. Grimball reported a case of ruptured appendix and peritonitis in a child twelve years old.

"Interesting Chest Conditions" was the subject of a clinic given by Drs. Hugh Smith and George R. Wilkinson. Dr. Smith first showed a patient whose historys was as follows: Miss M. W. ae. about 23 had an attack of pleurisy followed by tuberculosis of both apices in December, 1928. This was followed by an attack of influenza, and later in the spring of 1929, an extensive tuberculous involvement of both apices was observed. Her temperature was unstable for many months, but at length the upper lobes cleared up, however, there were rales noted over the upper back part of the chest. Phrenectomy on one side was advised and done. Result of this treatment was a marked improvement as the patient is now almost recovered.

The next case was that of an elderly woman, Mrs. G. W. N., ae. 72 who had complained of loss weight and blood-streaked sputum. Physical examination revealed an involvement of both bases, with many bubbling rales. After prolonged observation and treatment, the patient feels much better and has gained 10 pounds.

Laboratory and X-Ray findings: sputum negative for tubercle bacillus, Wassermann negative, Kahn Precipitation Test four plus; X-ray—negative for tuberculosis, but extensive involvement

of bases of lungs were observed. Administration of arsphenamine and mercury has produced a very satisfactory clearing up of both bases.

Another case of pulmonary tuberculosis with extensive adhesions was shown. Dr. Smith showed several very interesting X-ray films and lantern slides illustrating his cases.

Dr. Smith's cases were discussed by Dr. Wilkinson who emphasized three important points by stating that artificial pneumothorax had fallen somewhat into disuse until lately. The adhesions become tougher each time pneumothorax is done. In syphilis of the lung, there is no beading in radiographs as we have in the tuberculous lung. In the syphilitic lung there is a tendency to indiscreet gummatous formation as shown by X-ray, there is no tendency for the infection to follow the bronchial tree, and the lesion is more or less diffuse. Dr. Wilkinson also stated that there is considerable evidence that the tubercle bacillus belongs to the mold or mycotic group of bacteria. Discussed by Drs. Carpenter. Tyler, J. M. Fewell; closed by Dr. Wilkinson.

The Treasurer was then called upon to make his report, who after discussing the present state of the Treasury moved that the dues be raised to $10.00 a year; seconded by Dr. J. M. Fewell who amended the motion that cigars be furnished only on special occasions such as banquets; carried with amendment.

The President appointed Drs. Carpenter and murray to audit the Society's books.

Dr. Bruce was then called upon to make a report of the Committee on License Fees. He reported that the Committee had met with City Council Finance Committee three weeks previously, recommending the Society's proposed fee of $30.00 a year for the first $2,000 gross income and $1.00 for each additional $1,000 income. The report was received as information and the Committee ordered dissolved.

Dr. Wilkinson moved that we continue to meet in the Nurses' Lecture Hall at the City Hospital; seconded and carried.

Dr. R. D. Smith was automatically reverted to the honorary membership of the Society owing to his thirty years of active membership in the Society.

The President stated that one additional member had to be elected to the Board of Censors. Dr. Wilkinson nominated Dr. Brown and it was moved, seconded and carried that the Secretary cast the unanimous vote for Dr. Brown's election.

There being no further business, the meeting adjourned.

I. S. Barksdale, M.D.,
Secretary.

KERSHAW COUNTY MEDICAL SOCIETY MEETS

The Kershaw County Medical Association met with Dr. W. R. Clyburn in Camden, at 7:30 P.M., January 8, and after a splendid dinner, a timely and able paper on Diagnosis in Children and Mistakes Made in Such Diagnosis, was read by Dr. J. W. A. Saunders. The paper was generally discussed for almost two hours, a great interest having been aroused.

Four of the members present, Drs. Brasington, Clyburn, Corbett and Zemp, have been members of the County and State Medical Association continuously for from thirty-two to forty-six years.

J. W. Corbett, M.D.,
Secretary.

REGULAR MONTHLY MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY HELD AT LIBRARY HALL, MONDAY, DEC. 2, 1929

The meeting was called to order by the President, Dr. Murray at 8:00 P. M. with the following members present:

Drs. Murray, Davis, Black, Chas. O. Bates, Wilson, Simmons, J. D. Parker, J. W. Jervey, Jr., W. L. Bates, Metz, Pitman, Guess, Pollitzer, Garrett, Sanders, Mauldin, MaCalla, Hearin, Blakey, Goldsmith, Anderson, Johnston, Grimball, W. T. Brockman, Corn, Edwards, Wilkinson, and Barksdale.

The minutes of the last meeting were read and approved.

Reports of clinical cases were then called for. Dr. Pollitzer reported a case of abdominal pain with vomiting, with pathology located in the middle ear. Dr. Chas. O. Bates reported a case of tetanus which developed from a cut on the hand with a rusty axe. Incubation period was three weeks. At the time of reporting, Dr. Bates' patient had received 31,000 U. tetanus antitoxin.

Dr. Murray then called upon Dr. J. D. Parker, the essayist of the evening who presented an admirable paper on Eclampsia. In reviewing the history, it was mentioned that Hippocrates alluded to it in his writings. It was first called Eclampsia in 1760: Bandl in 1781 first recommended artificial rupture of the membranes as a therapeutic measure. In 1909, morphine, bromides and rest were first recommended as treatment, and lately magnesium sulphate and glucose has been tried with apparent success.

The aetiology is not definitely known, and the disease occurs in one out of 600 deliveries. It is most common in primipara, about 80 per cent of cases occuring in these women. Theories as to aetiology have been attributed to Ca deficiency, placental toxins, etc.

The primary pathology is apparently in the

liver, and secondary in the kidney with cerebral oedema and fatty degeneration; the foetal findings are similar.

De Lee places the mortality at 80 per cent. Eclamptics are prone to develop sepsis. Wet eclampsia offers the best prognosis. The foetal mortality is placed at 36 per cent.

The prevention of eclampsia is not always certain. Pre-natal care is very important. Every pregnancy should be considered as a possible eclamptic, all foci of infection should be eradicated, the diet should be regulated and meats limited. Fried foods, starch, etc. should be avoided. Low heel shoes, loose clothing should be advised. Constipation should be combatted, and the patient should be advised to sleep on alternate sides. Blood pressure and urine should be checked closely, especially in suspicious cases. Diminished urinary output should be noted. The patient should be instructed as to the symptoms of eclampsia. The blood pressure readings of late pregnancy should be contrasted to the readings of early pregnancy.

The early treatment of eclampsia should consist of the Carrel diet, small doses of glucose, low protein, salt-free diets should be outlined to the patient and fluids in moderate amounts should be advised.

Indications for interruption of pregnancy are intense headache, flashes of light before the eye, rapidly rising blood pressure, swelling, pains in epigastrium, and twitching.

Conservative treatment consists of the administration of magnesium sulphate, glucose, sedatives, and quiet. Dosage of glucose is 300 cc. of a 25 per cent solution. Labor should be induced then, if considered necessary by the simplest means. In cases of suddeness of onset, a disproportionate rise in blood pressure, with no uterine contractions, rigid soft parts, etc., radical treatment to end the pregnancy should be given. Conservatism is the best treatment. Discussed by Drs. Guess, Hearin, and W. T. Brockman. Dr. Davis moved that Dr. Parker's paper should be published; seconded and carried.

Having disposed of the scientific program, the election of officers for 1930 was in order.

Dr. Johnston nominated Dr. Guess for President.

Dr. Chas. O. Bates nominated Dr. Barksdale. Dr. Guess was declared elected over his opponent.

Dr. McCalla nominated Dr. Barksdale for Vice-President.

Dr. Mauldin nominated Dr. Pollitzer. Dr. Pollitzer was declared elected Vice-President for 1930.

The Secretary was nominated to succeed himself for 1930. It was moved, seconded and carried that nominations be closed, and the Secretary was re-elected.

Dr. Wilkinson nominated Dr. Hugh Smith to succeed himself as Treasurer for 1930; nominations were closed and Dr. Smith was re-elected unanimously.

The election of two new delegates to the State Convention was then in order. Dr. W. T. Brockman nominated Dr. Wilkinson; Dr. W. L. Bates nominated Dr. Murray who were elected unanimously.

Dr. Davis moved that the by-laws be suspended and that the delegates be empowered to select their own alternates.

It was moved, seconded and carried that the election of the Board of Censors be deferred until the next meeting.

Dr. Bates moved that the incoming officers of the Society find a new meeting place; seconded and carried.

The proposed license fees were again discussed by members of the Committee.

There being no further business, the meeting adjourned.

I. S. Barksdale, M.D.,
Secretary.

ANDERSON COUNTY MEDICAL SOCIETY

The Anderson County Medical Society held its regular meeting, January 8, 1930 at 12:00 noon, at the John C. Calhoun Hotel. Dr. Thos. R. Gaines president presiding over this meeting.

This being the first meeting of the year some matters of important business were before the society, the dues for the year 1930 were voted to stand at $10.00.

Dr. Frank Lander suggested the place of meeting be changed to the Anderson County Hospital. Dr. J. R. Young made a motion and it was carried that a committee be appointed to decide upon place of meeting. The following committee were appointed. Drs. E. E. Epting, Frank Wrenn and A. L. Smeathers.

Dr. J. N. Land brought to the attention of the society, in regard to the county's appropriation for the Anderson County Hospital be increased to take care of indigent cases. Dr. Young made a motion and it was carried that Anderson County be asked to appropriate $10,000 for this needed cause and for the president to appoint a committee to go before the delegation and stress the urgent needs of these funds. The following committee was appointed: Drs. J. N. Land, E. E. Epting, Frank Wrenn and J. R. Young.

The officers who were elected at the December meeting were installed and are the following: Dr. Thos. R. Gaines, President; Dr. E. O. Hentz, Vice-President; Dr. D. J. Barton, Secretary and Treasurer.

Scientific Program—Dr. Wade Thompson reported a very interesting case of obscure tumor

in stomach of a child age 4 years, 6 months, which was X-rayed and operated upon and found to be a mass of persimmons. Drs. H. W. Corbett and J. R. Young discussed this case fully in a very interesting and instructive manner. Diagnosis—Phyto—Benzar of stomach.

Dr. Frank Lander, made a motion that Dr. Thompson be asked to report this case to the South Carolina Medical Journal for publication, after some discussion the motion was carried.

At the conclusion of the program luncheon was served.

Members present—26.

Visitors present—1.

D. J. Barton, M.D.,
Sec. & Treas.

PROCEEDINGS OF THE ANNUAL MEETING (140th Anniversary) OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT FRANCIS MARION HOTEL, TUESDAY EVENING, DECEMBER 10, 1929, AT 8:30 P. M.

The meeting was called to order by the President, Dr. Henry P. Jackson.

Present: Doctors: A. E. Baker; A. E. Baker, Jr.; B. R. Baker; Ball; Banov; Beach; Beckman; Boette; Bowen; Bowers; Burn; Byrnes; Cannon; Chamberlain; Deas; de Saussure; Finger; W. H. Frampton; Heidt; Jackson; F. B. Johnson; W. H. Johnson; Kollock: LaRoche; Lynch; McInnes; Maguire; Martin; Mitchell; Mood; Moore; O'Driscoll; Palmer; E. F. Parker; F. L. Parker; Pearlstine; Phillips; Prentiss; F. R. Price; Ravenel; Rhame; R. B. Rhett; W. M. Rhett; W. P. Rhett; Richards; Rutledge; Sanders; Scharlock; Scott; S. Simons; J. E. Smith; W. A. Smith; C. A. Speissegger; Taft; Townsend; Waring; Wild; I. R. Wilson; L. A. Wilson; R. Wilson; Whaley; W. H. Speissegger; Hope; I. R. Wilson, Jr.; Sughrue; Elston. (66).

Guests: Dr. Charles R. May, President, South Carolina Medical Association; Dr. Edgar A. Hines, Secretary, South Carolina Medical Association; Dr. Edgar Thompson, Captain, U. S. Navy; Dr. Burgh R. Burnett, Major, U. S. Army; Dr. Douglass Jennings and Dr. L. R. Kirkpatrick of Bennettsville; Dr. Roe E. Remington of the South Carolina Food Research Commission; and others.

The minutes of the regular meeting of November 28th, and the special meeting of November 29th were read and confirmed.

Under the head of Miscellaneous Business, Dr. Edward Rutledge, one of the ex-presidents, presented in behalf of the past presidents of the Society, a bowl of delightful punch. This was graciously accepted by the President, in behalf of the Society.

The President stated that the Election of Officers was now in order. The following were then elected:

President—Dr. J. S. Rhame.

Vice-President—Dr. Henry W. de Saussure.

Secretary—Dr. W. Atmar Smith.

Treasurer—Dr. J. H. Cannon.

Librarian—Dr. W. C. O'Driscoll.

Commissioner of Roper Hospital (five years)—Dr. F. G. Cain.

Member of Board of Censors (three years)—Dr. M. W. Beach.

Delegate to State Association (five years)—Dr. W. A. Smith.

Alternates to State Medical Association—Dr. D. L. Maguire, Dr. J. E. Smith, Dr. J. J. Ravenel, Dr. W. H. Prioleau and Dr. R. L. McCrady.

Dr J. Walter Burn and Dr. George McF. Mood were elected Honorary Fellows, having completed twenty-five years as members of the Society.

Dr. Henry P. Jackson, the retiring President, made the following address:

The hour has come in which I must (figuratively speaking) divest myself of my robe of office.

I feel sure that, in view of the extended programme which has been prepared for the celebration of this 140th anniversay of the birth of this society (which programme includes an address by the President of the Medical Association of South Carolina and one by the Secretary of the Association, as well as talks by former presidents of this Society) you will not expect me to take up a great deal of your time.

I feel that it is fitting that my discourse should be of the nature of a President's Report, in which I shall endeavor to summarize briefly some of the more important activities of the Society during the past two years.

The Society made protest in regard to the Oddie Bill and against the raising of the narcotic tax, to the representatives of this State in the national government. It appealed to the national representatives to support the bill granting a pension to Mrs. Goldberger.

A committee of the Society, after consultation with several members of the legal profession, offered a report the digest of which was to have certain laws passed in regard to Medical Expert Testimony. This report was adopted by the Society, and was received favorably by the State Medical Association, but the laws suggested were not passed by the legislature.

Perhaps the most outstanding event was the convention of the State Medical Association, which took place here in the early part of May, 1929. Thanks to the efficiency and indefatigable work of the committee, of which Dr. Lynch was chairman, in conjunction with the committee of the State Association, this meeting was highly successful both in its scientific and social aspects.

The Charleston Exchange for Women's Work, having ceased to function, donated the sum of

money remaining in their possession to the Roper Hospital for the purpose of creating a fund the proceeds of which were to be used by the Orthopedic Department of the Hospital.

A legacy left for the endowment of the Emma Worrell Lowber Memorial Room at the Riverside Infirmary, was received.

The Society strongly opposed the projected plan for the adoption of a double session in the public schools, and was largely instrumental in causing its abandonment.

The Society has invited the Tri-State Medical Association and the American Public Health Association to meet in Charleston in 1930.

A resolution was passed memorializing City Council for the expansion of Hospital facilities, particularly in regard to a much needed Contagious Disease Ward.

The Committee on Ross Estate, working together with their Counsel, Mr. M. Rutledge Rivers, have now brought to a successful close the settlement of this Estate and the monies and property bequeathed to the Medical Society are now under control of the Society.

One of the pleasant occurrences of this year was the reception tendered by the Society to Sir Wilfred and Lady Grenfell. Sir Wilfred's fame has extended throughout the English speaking world, for his wonderful work done among the natives in Labrador.

The Scientific Meetings have been of a high order. The papers and discussions have taken in a wide range and the many phases of modern medicine have been included in their scope. We have had outstanding men in different fields address the Society, among them being the following:

Dr. A. B. Davis, of New York; Dr. John A. Smith, of New York; Dr. Thompson Fraser, of Asheville; Dr. Frontz, of Baltimore; Dr. White, of Greenville. Drs. McLendon, Marine, Ravenel Mills, J. H. Parler, and Burgess. The latter case and Weston; Dr. Dinemore, of Cleveland; Dr. D. L. Smith, of Spartanburg; Dr. Wilkie Jervey; and others. The last distinguished guest to be entertained by the Society was Sir Henry Gray, of Montreal, who read before the Society a masterly paper on Abdominal Surgery.

The Society has prospered during the past two years. Its meetings have been largely attended and its membership has increased, the roll now showing ninety-two members.

The Board of Finance are to be commended for their careful and conscientious administration of the monetary affairs of the Society.

And now in closing, I wish to thank the officers and members of the Society for their uniform courtesy to me during my term of office, and especially do I wish to thank the Secretary, Dr. W. Atmar Smith, for the invaluable assistance he has rendered me in the administration of the affairs of the Society.

I congratulate my successor upon his election to the Presidency of this Society, and wish for the Society continual prosperity under his administration.

The President then appointed a committee to conduct the newly-elected President, Dr. J. Sumter Rhame, to the chair.

On motion, the business meeting was concluded, and the members of the Society proceeded to the ballroom for the annual banquet. At the conclusion of the repast, the President introduced Dr. Charles W. Kollock, the senior ex-president of the Society, as Toastmaster. Dr. Kollock delivered a short address, after which he called upon the following ex-presidents, who addressed the Society: Dr. E. F. Parker, Dr. A. E. Baker, Dr. J. C. Mitchell, Dr. Robert Wilson, Dr. Edward Rutledge, and Dr. H. P. Jackson. The Toastmaster then called upon Dr. Charles R. May and Dr. Edgar A. Hines, of the State Medical Association, who responded in behalf of the South Carolina Medical Association. Dr. Edgar A. Thompson, U. S. Navy, on being called upon, made a few brief, but much enjoyed remarks.

The Secretary announced that telegrams of congratulation to the Society had been received from Dr. R. S. Cathcart and Dr. A. J. Buist, ex-presidents of the Society who were unable to be present as they were attending the meeting of the Southern Surgical Association at Atlanta, Georgia.

The Toastmaster then turned the meeting over to the President, after which the Society adjourned.

W. Atmar Smith, M.D.,
Secretary.

SECOND DISTRICT MEDICAL ASSOCIATION OF SOUTH CAROLINA. LEESVILLE, S. C., JANUARY 15, 1930

Program

1. Meeting called to order by A. L. Ballenger, M.D., Batesburg, President.
2. Reading of the Minutes of the Saluda Meeting. (July, 1929).
3. Payment of Dues.
4. Remarks by the President, A. L. Ballenger, M.D., and Address of Welcome by W. M. Crosson, M.D., Batesburg.
5. "Suppurative Pericarrditis" with report of a Case—Joe Dillard, M.D., Columbia.
6. "Subjects Now Being Discussed by the Profession"—Charles R. May. M.D., Bennettsville.
7. "Review of the Undulant Fever Situation"—J. Heyward Gibbes, M.D., Columbia.

8. "Pitfalls of Proctology"—Frank M. Durham, M.D., Columbia.
9. "Some Original Ideas Both Absolute and Relative"— G. P. Neel, M.D., Greenwood.
10. Unfinished Business.
11. Report of Committees.
12. Discussion as to Place of Next Meeting.

Austin T. Moore, M.D., Columbia.
Secretary & Treasurer.

THE SUMTER COUNTY MEDICAL SOCIETY

The Sumter County Medical Society met in the nurses home on January 2d beginning the new year aright.

There was no scientific program, but the meeting was an interesting one because of the clinical cases reported and the discussion which followed. Among the interesting cases reported was one by Dr. Littlejohn, and others by Drs. Bradley, Mills, J. H. Parler, and Burgess. That latter case involved one of medical ethics. This evoked long, continued, and beneficial discussion, which we believe will prove of value to the Society.

Perhaps the most interesting clinical case that has been reported in many moons was reported by Dr. Parler. It was a case of obstetrics in a colored woman. After many hours hard work, assisted by the mother of the young woman only, he managed to make a delivery. Whereupon the old mother who was sitting on the bed helping exclaimed, "Do, Jesus, thank you, Sir." The doctor made a second examination, ruptured the membranes and handed out a second baby, whereupon the old mother exclaimed again, "Do, Jesus, Lord have mercy." Making a third examination and rupturing a third membrane he delivered another baby, whereupon the old mother said, "Well, I be damned."

The Society then adjourned for supper as usual.

H. L. Shaw, M.D.,
Secretary Sumter County Medical Society.

MARLBORO COUNTY MEDICAL SOCIETY ANNUAL NEW YEAR'S MEETING AND BANQUET WEDNESDAY AFTERNOON, JANUARY 8, 1930 AT 5:00 O'CLOCK MASONIC TEMPLE, BENNETTSVILLE, S. C.

Program

From 3:00 to 4:45 P. M., a reception was held at the Marlboro County General Hospital—the first Duke Endowment Hospital to be opened in South Carolina.

1. A Few Remarks—Dr. C. R. May, Pres. S. C. Medical Association, Bennettsville, S. C.
2. Some Urgent Economic Problems for Organized Medicine to Solve—Dr. E. A. Hines, Sec'y S. C. Medical Association, Seneca, S. C.
3. Pulmonary Abscess following Tonsillectomy, Dr. P. V. Mikell, Columbia, S. C. Discussion Opened by Dr. W. J. Bristow, Columbia, S. C.
4. Clinic: Neuropsychiatric Cases, Dr. O. B. Chamberlain, Charleston, S. C.

DINNER IN BANQUET HALL

5. Fundamental Considerations in Cardiac Diagnosis, Dr. J. H. Cannon, Charleston, S. C. Discussion opened by Dr. Robert Wilson, Charleston, S. C.
6. Ulcers of the Stomach and Duodenum—Lantern Slide Demonstration. Dr. Fred M. Hodges, Chairman Section on Radiology, Am. Med. Ass'n, Richmond, Va.
7. Post-operative Treatment in Major Surgery—Dr. A. E. Baker, Sr., Charleston, S. C. Discussion opened by Dr. George H. Bunch, Columbia, S. C.

Dr. D. D. Strauss, Sec.,
Bennettsville, S. C.

RIDGE MEDICAL SOCIETY MEETS

The Ridge Medical Society met in the usual place at seven o'clock, Monday evening, the sixteenth of December with a good attendance.

Senator Chas. E. Taylor and Hon. J. Ed. Kaiser, Dr. W. H. Price and Dr. S. C. Brooker of Lexington County and Hon. Geo. W. Scott of Edgefield County attended our meeting which was addressed by Dr. Benj. H. Wyman of the State Board of Health, who gave a resume of the various phases of the activities and appropriations and expenditures of the State Board of Health.

Dr. E. C. Ridgell made a report for the society as to the costs, etc., of the State Board of Health

Dr. Timmerman in discussing Dr. Wyman's address called attention to the desirability of the counties of Edgefield, saluda and Lexington, having a joint alms-house or home, and of the possibility of securing a suitable place and home at a very moderate price.

Dr. E. C. Ridgell in his remarks endorsed the work of the State Board of Health and heartily approved the idea of a joint alms-house for the three counties.

Dr. F. G. Asbill voiced the sentiments of the society in approving the idea of having a publicity bureau for the State Board of Health.

Senator Taylor expressed himself as favoring the publicity bureau of the State Board of Health and the joint alms-house for the three counties.

Supper was served at the Commercial Hotel where short speeches were made on these matters by Dr. Crosson and all of the legislators.

Dr. J. B. Edwards of Swansea joined our society.

Dr. G. A. Westrope rendered two beautiful violin solos.

The society unanimously thanked Dr. Westrope for his music and Dr. Wyman and the legislators for their presence and addresses.

We feel that our meeting with our legislators was not only pleasant but beneficial and we hope to have others in the future.

We anticipate a good meeting of our district association in Leesville the third Wednesday in January.

Dr. W. T. Gibson and family who moved to Bailey, N. C., about a year ago have returned to Batesburg and probably will reside here permanently.

Dr. W. P. Timmerman will take the oath of office as Mayor of Batesburg the first day of 1930.

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL TUESDAY EVENING, NOVEMBER 26th, 1929 AT 8:30 O'CLOCK

The meeting was called to order by the President, Dr. Henry P. Jackson.

Present: Doctors: A. F. Baker, Jr.; Banov; Beach; Bowers; Buist; Byrnes; Cain; Cannon; Cathcart; Chamberlain; Deas; de Saussure; W. H. Frampton; Jackson; Kollock; Lynch; McCrady; Maguire; Martin; Mitchell; Mood; O'Driscoll; Palmer; E. F. Parker; F. L. Parker; Pearlstine; F. R. Price; W. H. Price; Prioleau; Ravenel; Rhame; W. M. Rhett; W. P. Rhett; Richards; Rutledge; Sanders; J. E. Smith; W. A. Smith; C. A. Speissegger; Taft; Waring; I. R. Wilson; Robert Wilson; Whaley; W. H. S. Speissegger; Hope; I. R. Wilson, Jr.; Sughrue; Elston. (49.)

Guests: Dr. Thomas Brockman, of Greer, S. C.; Dr. Pittman, of Greenville; Dr. R. E. Remington; Major Berg Burnett, U. S. Army; internes, and senior medical students.

The minutes of the meeting of November 12th were read and confirmed.

Dr. G. McF. Mood presented to the Society a bound copy of the Report of the Board of Commissioners of Roper Hospital for the year 1928.

Dr. Mood also called the attention of the Society to the fact that the Board of Commissioners had inaugurated a campaign for the expansion of the facilities of the Hospital by erecting a new wing to house a department for communicable disease, a department for mental diseases and one for orthopedics. He stated that this project would cost about three hundred thousand dollars ($300,000.); that efforts were being made to obtain one hundred thousand ($100,000.) of this from the City, one hundred thousand ($100,000.) from the County of Charleston, and one hundred thousand ($100,000.) from the Duke Foundation. He urged that every member of the Society familiarize himself with the project, in order that he might be able to present it intelligently to any person who wanted to secure information about it. He stated that for the successful accomplishment of this matter, the co-operation of every member of the Society was needed. This report was received as information.

Under Miscellaneous Business, the President announced that nominations of officers for the ensuing year were now in order.

For President, Dr. E. F. Parker nominated Dr. J. S. Rhame. Seconded by Dr. Rutledge. Dr. D. L. Maguire nominated Dr. J. H. Cannon. Seconded by Dr. de Saussure. Dr. Cannon expressed his appreciation, but requested that his name be withdrawn. He did this in a very gracious manner. Dr. Maguire then withdrew Dr. Cannon's nomination.

For Vice-President, Dr. Henry W. de Saussure was nominated and seconded.

For Treasurer, Dr. J. H. Cannon was nominated and seconded.

For Secretary, Dr. W. A. Smith was nominated and seconded.

For Librarian, Dr. W. C. O'Driscoll was nominated and seconded.

For Commissioner of Roper Hospital, Dr. C. F. Cain was nominated and seconded.

For member of Board of Censors, Dr. M. W. Beach was nominated and seconded.

For Delegate to State Medical Association, Dr. W. A. Smith was nominated and seconded.

For Alternate Delegates to State Medical Association, Drs. Maguire, J. E. Smith, Ravenel, Prioleau, and McCrady were nominated and seconded.

For Honorary Fellowship, Drs. J. W. Burn and G. McF. Mood were nominated and seconded.

The Secretary announced that a special meeting would be held on the evening of November 29th in honor of Sir Henry M. W. Gray, of Montreal, Canada, and that a smoker had been arranged for, after the meeting.

The Secretary also announced that the one hundred and fortieth anniversary meeting would be held at the Francis Marion Hotel on the evening of December 10th.

The Scientific Meeting was called at 9:00 P. M.

Dr. Henry Deas reported a case in which he had used chloretone and sodium amitol for general anesthesia in appendicitis. He stated that this was followed by paralyticilius. The patient recovered. This was discussed by Drs. E. P. Parker and E. R. Price.

Dr. F. C. Cain reported a case of chronic ulcerated colitis which had presented a problem in diagnosis until examination with the sigmoidoscope revealed the true condition. Discussed by Dr. F. R. Price.

The speaker of the evening was Dr. Thomas Brockman, of Greer, S. C. Dr. Brockman, on

being introduced by Dr. J. S. Rhame, expressed his appreciation of the invitation to address the Society, stating that he considered it the greatest honor he had ever had bestowed upon him. The subject of Dr. Brockman's paper was "Diseases of the Terminal Bowel." He made an able and illuminating presentation of the subject.

There being no further business, the meeting adjourned.

W. Atmar Smith, M.D.,
Secretary.

PROCEEDINGS OF THE SPECIAL MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT THE ROPER HOSPITAL, FRIDAY EVENING, NOVEMBER 29th, 1929, AT 8:30 O'CLOCK

The meeting was called to order by the President, Dr. Henry P. Jackson.

Present: Doctors: Allen; A. E. Baker; A. E. Baker, Jr.; B. R. Baker; Ball; Banov; Beach; Boette; Bowen; Bowers; Buist; Byrnes; Cain; Cannon; Cathcart; Chamberlain; de Saussure; Finger; Gantt; Green; Jackson; F. B. Johnson; Kollock; LaRoche; McCrady; Mitchell; O'Driscoll; E. F. Parker; F. L. Parker; Pearlstine; Phillips; F. R. Price; W. H. Price; Ravenel; Rhame; W. M. Rhett; Richards; Rutledge; Sanders; Scharlock; J. E. Smith; W. A. Smith; C. A. Speissegger; Waring; Robert Wilson; Whaley; W. H. S. Speissegger; Hope; I. R. Wilson, Jr.; Sughrue; Elston. (51).

Guests: Sir Henry M. W. Gray, of Montreal, Canada; Dr. William Enright, of Montreal, Canada; Doctors Samuel Harmon, Floyd D. Rodgers and Young, of Columbia; Dr. Grady Callison, of Newberry; Major Berg Burnett, U. S. Army; and Dr. Benjamin McInnes, of Charleston.

The President announced that the special meeting was being held in honor of the visit to Charleston of Sir Henry M. W. Gray, of Montreal, Canada, who was the guest of the St. Andrew's Society and would deliver an address on St. Andrew's Day. In introducing the speaker, the President pointed out the many honors which Sir Henry had had conferred upon him, having been knighted for his services during the War, by His Majesty, the King of England. Sir Henry expressed his appreciation of the honor in speaking before this Society, and delieverd an address on the surgery of certain intestinal and peritoneal defects, a brief summary of which is enclosed herewith.

Dr. William Enright was also introduced and made a few pleasing remarks.

At the conclusion of these addresses, their being no further business, the meeting adjourned, and an informal reception was held.

W. A. Smith, M.D.,
Secretary.

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA HELD AT ROPER HOSPITAL TUESDAY EVENING OCTOBER 8, 1929 AT 8:30 O'CLOCK

The meeting was called to order by the Vice-President, Dr. J. W. Burn.

Present: Doctors: Sylvia Allen, B. R. Baker, Ball, Banov, Beach, Beckman, Bowen, Bowers, Buist, Burn, Byrnes, Cain, Cannon, Chamberlin, Deas, de Saussure, F. B. Johnson, Kollock, Lynch, McCrady, McInnes, Maguire, Mitchell, C. McF. Mood, M. S. Moore, O'Driscoll, Palmer, Pearlstine, Prentiss, Price, Prioleau, R. B. Rhett, M. W. Rhett, Richards, Rutledge, Sanders, Scott, J. E. Smith, W. A. Smith, Townsend, Waring, Wild, I. R. Wilson, Robert Wilson, Whaley. (45).

Guests: Dr. E. Martinez, Health Officer, Rio Piedras, Porto Rico, Dr. Morton, U. S. N. Doctors Seghrue, Hope, I. R. Wilson, Speissegger of Charleston, also Hospital Internes and Medical Students.

The minutes of the regular meeting of June 25th and special meetings held August 14th and September 25th were read and confirmed.

The Secretary submitted applications of Doctors John Sughrue, W. H. S. Speissegger, R. M. Hope and I. R. Wilson, Jr., for membership in the Society. These applications were all properly endorsed and accompanied by initiation fee. The President directed that these applications be referred to the Board of Censors.

The Secretary announced that Dr. H. H. Plowden had transferred his membership to the Richland County Medical Society.

The Secretary presented a request of Dr. James D. Whaley for transfer from the York Medical Society. This request was accompanied by a transfer card of the Secretary of the York Society. It was moved, seconded and accepted that Dr. James B. Whaley be accepted by transfer to membership in the Medical Society of South Carolina from the York Medical Society.

Dr. C. W. Kollock, Chairman of the Board of Censors made a report on the eligibility of certain members of the Dental and Medical Professions for the privileges of the Hospital. This was received as information.

The Secretary stated that as an effort was being made by the State Health Officer, along with the Mayor of the City and Chamber of Commerce, to have the American Public Health Association meet in Charleston, that he had been requested by these agencies to extend an invitation in behalf of this Medical Society to this Association to hold its convention in Charleston in 1931. The Secretary stated that he felt authorized to do this in view of the Society's action at a previous meeting in this regard. It was moved, seconded and

carried that the action of the Secretary be approved.

The following letter from F. O. Bates, Secretary of the General Staff was read by the Secretary:

July 23, 1929.

Dr. W. A. Smith, Secretary,
Medical Society of South Carolina,
Charleston, South Carolina.
Dear Dr. Smith:

The following resolution was passed at the last meeting of the General Staff:

"A resolution was introduced by Dr. A. J. Buist to the effect that at the first meeting of the Medical Society of South Carolina that the Society be requested to have its delegates to the State Medical Society introduce a resolution requesting the Legislative Committee of that body have introduced in the Legislature a bill that will allow the hospitals of this State to have the right to hold autopsies upon such charity patients in those institutions, who may die, where the cause of death is uncertain or of scientific interest. Resolution was carried."

Yours very truly,
(Sgd.) F. O. Bates,
Secretary.

It was moved and seconded that this resolution be adopted, after some discussion in which Doctors Cannon, Chamberlain and Prioleau took part. The motion to adopt was carried.

The Secretary read letters from Dr. W. R. McGill, Secretary of the York Society and Dr. William Sheridan of the Spartanburg County Medical Society in which these societies approved of the action taken by this Society in regard to the proposal to remit fees of those who had passed the National Board of Medical Examiners by the State Board of Medical Examiners and a letter from Dr. H. L. Shaw, Secretary of the Sumter County Medical Society opposing this proposition.

The Scientific Meeting was called at 9 o'clock P. M.

The Program for the evening was a Symposium on the treatment of syphilis. Dr. Paul W. Sanders read an able paper on the general aspects of treatment. Dr. O. B. Chamberlain discussed the special methods of treating neurological syphilis and Dr. J. I. Waring presented the application of remedies for the treatment of congenital syphilis. These papers were discussed by Doctors F. R. Price, James D. Whaley, William Rhett and M. W. Beach. Doctors Sanders and Chamberlain closed the discussion.

On completion of the Scientific session the order of business reverted to was resumed under reports of officers and committees. Secretary read the following letter from Dr. R. H. Laning:

"To the President, Officers and Members of the Medical Society of South Carolina:

"Gentlemen:

"On the eve of leaving Charleston please accept my thanks and appreciation of the exceptional courtesies and cordiality shown me in numerous ways both officially by the Society and personally by its members during my stay in this City. I shall always look back with the greatest pleasure to the agreeable and profitable hours spent in your midst, and shall aways have the greatest regard for your high standard of professional conduct and ethics, which, as stated by a high ranking Naval Medical Officer, is not probably equalled in any community of this country.

"Yours respectfully,

"(Sgd.) R. H. Laning, Comdr. (MC) U. S. N."

He also read a letter from Mr. C. W. Miller, Director of the Bureau of Vital Statistics urging the members of this Society to register berths and also read a letter from Dr. Olin West, Secretary of the American Medical Association, which was in reply to a letter from the Secretary, requesting information in regard to Dr. Pusey's relationship with the soap manufacturers. This letter of Dr. West's was in explanation of Dr. Pusey's position in the matter. These letters were all received as information.

Under miscellaneous business, Dr. Robert Wilson brought up the matter of entertainment of Sir Henry Gray by this Society. He stated that Dr. Gray would visit Charleston, November 30, 1929, to give the Centennial address before the St. Andrews Society. He moved that a committee be appointed to arrange for some proper form of entertainment, seconded and carried.

Dr. James M. Whaley signed the Constitution, after which the Society adjourned.

W. Atmar Smith, M.D.,
Secretary.

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL TUESDAY EVENING OCTOBER 22nd, 1929, AT 8:30 O'CLOCK

The meeting was called to order by the President, Dr. Henry P. Jackson.

Present: Doctors: Allen; A. E. Baker, Jr.; B. R. Baker; Banov; Beach; Beckman; Bowen; Bowers; Buist; Burn; Byrnes; Cain; Cathcart; Chamberlain; Deas; Jackson; Kollock; McCrady; McInnes; Maguire; Martin; Mitchell; Mood; Moore; O'Driscoll; F. L. Parker; F. R. Price; W. H. Price; Prioleau; Ravenel; Rhame; R. B. Rhett; W. M. Rhett; Rutledge; Sanders; J. E. Smith; W. A. Smith; Speissegger; Taft; Townsend; Wild; L. A. Wilson; Robert Wilson; Whaley. (44).

Guests: Dr. Tom A. Williams, Washington, D. C.; Dr. Edgar Thompson, U. S. N.; Captain

Malcolm, U. S. A.; Doctors Elston, Hope, Sughrue and Speissegger, of Charleston; Hospital Internes and Medical Students.

The minutes of the meeting of October 8th were read and confirmed.

The Secretary presented the application of Dr. L. F. Elston of Charleston, for membership in the Society. It was directed that the Secretary refer the application to the Board of Censors.

Under the election of new members, the Secretary reported that the application of Dr. W. H. S. Speissegger of Charleston, for membership in the Medical Society, had been approved by the Board of Censors. The President directed the Society to proceed with the election. The tellers reported that the doctor had been unanimously elected. The President then declared Dr. Speissegger a member of the Society and directed the Secretary to notify him to be present at the next meeting in order that he might sign the Constitution.

Under the election of new members, the Secretary reported that the application of Dr. R. M. Hope of Charleston, for membership in the Medical Society, had been approved by the Board of Censors. The President directed the Society to proceed with the election. The tellers reported that the doctor had been unanimously elected. The President then declared Dr. Hope a member of the Society and directed the Secretary to notify him to be present at the next meeting in order that he might sign the Constitution.

Under the election of new members the Secretary reported that the application of Dr. I. Ripon Wilson, Jr., of Charleston, for membership in the Medical Society, had been approved by the Board of Censors. The President directed the Society to proceed with the election. The tellers reported that the doctor had been unanimously elected. The President then declared Dr. Wilson a member of the Society and directed the Secretary to notify him to be present at the next meeting in order that he might sign the Constitution.

Under the election of new members the Secretary reported that the application of Dr. John Sughrue, of Charleston, for membership in the Medical Society, had been approved by the Board of Censors. The President directed the Society to proceed with the election. The tellers reported that the doctor had been unanimously elected. The President then declared Dr. Sughrue a member of the Society and directed the Secretary to notify him to be present at the next meeting in order that he might sign the Constitution.

Under Reports of Officers and Committees, Dr. Robert S. Cathcart, Chairman of the Committee on the Ross Estate, reported as follows:

October Twenty-second
Nineteen Twenty-nine.

To the President and Members of the Medical Society of South Carolina,

Gentlemen:

The Committee on Ross Estate begs to report that they received on July 1st, 1929 from the executors of the Ross Estate, a check for Fifteen thousand, eight hundred and eighty-nine Dollars and fifty-four Cents ($15,889.54) of which Four thousand and sixty-three Dollars and eighteen Cents was on account of the principal of the residuary estate under the Will of Miss Mary Jane Ross; and Eleven thousand, eight hundred and twenty-six Dollars and thirty-six Cents on account of the income from the residuary estate devised to the Medical Society of South Carolina as trustees under the Will by the said Mary Jane Ross, Harry P. Jackson, M. D., President, and W. Atmar Smith, M.D., Secretary, executing the receipt for the Society.

Committee on Ross Estate
R. S. Cathcart,
Chairman.

It was moved, seconded and carried that this report be received as information and spread on the minutes.

Dr. Robert S. Carthcart, Chairman of the Board of Finance, reported as follows:

October Twenty-second
Nineteen Twenty-nine

To the President and Members of the Medical Society of South Carolina,

Gentlemen:

The Board of Finance begs to report that they received from the Committee on Ross Estate on July 2nd, 1929, a check for Fifteen thousand, eight hundred and eighty-nine Dollars and fifty-four cents ($15,889.54), Four thousand and sixty-three Dollars and eighteen Cents ($4,063.18) being partial payment on the principal of the residuary estate under the terms of the Will of Miss Mary Jane Ross. The Board of Finance invested this amount to the credit of the Ross Henry Memorial Fund according to the terms of the Will of Mary Jane Ross. Eleven thousand, eight hundred and twenty-six Dollars and thirty-six Cents ($11,826.36) is income, which amount is for the Roper Hospital.

Respectfully submitted,
Board of Finance,
R. S. Cathcart,
Chairman.

The same action was taken on this report.

The President announced that he had appointed the Programme Committee to arrange for the entertainment of Sir William Gray on his visit to Charleston in November.

At 9:00 P. M. the Scientific Program was called.

Under Case Reports, Dr. W. A. Smith reported a case of post operative massive atelectasis.

The next number on the program was by Dr. J. E. Smith, on broncoscopy. r. Smith discussed the general field of usefulness of this procedure, and reported a series of cases in which he had removed foreign bodies from the trachis, bronchi and esophagus. He exhibited the foreign bodies removed and demonstrated the use of the various instruments for these operations. This was discussed by Dr. C. W. Kollock.

The Symposium on Spinal Anesthesia was next presented. Dr. R. L. McCrady discussed the use of spinal anesthesia in gynecology and obstetrics. Dr. D. L. Maguire discussed its use and value in general surgery, and Dr. W. H. Prioleau explained the technique and discussed the advantages and disadvantages of this method of anesthesia. These papers were discussed by Doctors F. R. Price, Ravenel, B. R. Baker, J. D. Whaley, and A. E. Baker, Jr. Dr. Prioleau closed the discussion.

Dr. Tom A. Williams, of Washington, on being called on by the President made a short address, in which he praised the work being done by this Society.

At the conclusion of the Scientific Program, the regular order of business was taken up.

Dr. G. McF. Mood, Chairman of the Board of Commissioners, brought before the Society the matter of the treatment of contagious diseases at Roper Hospital. He pointed out the inadequate facilities for proper isolation and treatment of communicable diseases, and urged that some steps be taken by the Society to improve the situation. Dr. Robert Wilson, physician in chief of the Hospital, emphasized the inadequacy of the present facilities, and offered the following resolution:

RESOLVED, that in view of the inadequate and unsatisfactory facilities for isolating and treating communicable diseases at the Roper Hospital, that the Medical Society of South Carolina memorialize the Mayor and City Council and the Charleston County delegation, calling attention to this great need and praying financial support for the construction of a modern communicable disease department.

This was seconded by Dr. W. M. Rhett, discussed by Doctors Beach and Banov, and unanimously adopted.

There being no further business, the meeting adjourned.

W. Atmar Smith, M.D.,
Secretary.

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL TUESDAY EVENING, NOVEMBER 12th, 1929, AT 8:30 O'CLOCK

The meeting was called to order by the President, Dr. Henry P. Jackson.

Present: Doctors: Allen; B. R. Baker; Ball; Banov; Beach; Boette; Bowen; Bowers; Buist; Burn; Byrnes; Cain; Cannon; Chamberlain; Deas; de Saussure; Jackson; F. B. Johnson; Kollock; Lynch; Maguire; Mitchell; Mood; Palmer; W. H. Price; Prioleau; Rhame; Richards; Rutledge; Sanders; Scott; W. A. Smith; Taft; Waring; I. R. Wilson; Whaley; W. H. S. Speissegger; Hope; I. R. Wilson, Jr.; Sughrue; Elston.

Guests: Dr. W. P. Herbert, of Asheville, N. C.; Doctors George Bunch, Thomas Pitts, and L. E. Madden, of Columbia, S. C.; Dr. Berg Burnett, Major, U. S. A.; Miss Allie Green, of Columbia; Hospital Internes, and Senior Medical Students.

The minutes of the meeting of October 22nd were read and confirmed.

Under Election of New Members, the Secretary reported that the application of Dr. L. F. Elston had been approved by the Board of Censors, and he was eligible for election. The election was then proceeded with, and Dr. Elston was declared unanimously elected a member of this Society.

The President announced that the District Medical Society would meet in Walterboro on November 13th, 1929.

The following newly-elected members signed the constitution: Doctors W. M. S. Speissegger, John Sughrue, I. Ripon Wilson, Jr., R. M. Hope, and L. F. Elston.

The Scientific Program was called at 9:00 P. M.

Dr. W. Atmar Smith reported and exhibited four cases of Pulmonary Tuberculosis which had been successfully treated by artificial pneumothorax.

Dr. W. P. Herbert, of Asheville, North Carolina, addressed the Society on the Surgery of Pulmonary Tuberculosis, exhibiting lantern slides and X-ray films to illustrate his lecture. At the conclusion of this address, the following took part in the discussion of the subject: Doctors George Bunch, Thomas Pitts, and L. E. Madden, of Columbia, Major Burnett, Doctors W. A. Smith, Maguire, Taft, Dr. Herbert closing.

There being no fu ther business the meeting adjourned.

W. Atmar Smith, M.D.,
Secretary.

YORK COUNTY MEDICAL ASSOCIATION MEETS

The regular bi-monthly meeting of the York County Medical Association was held in Rock Hill, December 10, 1929. Dr. W. P. Beckman of the State Hospital was the invited guest. He spoke in the interest of placing a clinic in Rock Hill similar to seven other clinics that are operating in different counties to supplant the work of the State Hospital in taking care of her mentally deficient more especially the adult class of patients. The subject was favorably taken by members of the York County Medical Society and by a vote it was decided to begin such a clinic in Rock Hill the place and a time in the near future to be decided by Dr. Beckman.

One of the local men gave a paper on Empyema. Two other papers were carried over for next year's program because this was the time of election of officers for another year and the program was a little longer than our usual ones.

The old officers were reelected; President, Dr. Norma P. Dunning, Rock Hill, S. C.; Vice President, Dr. W. C. Whitesides, York, S. C.; Secretary-Treasurer, Dr. W. K. McGill, Clover, S. C.

The Society has had all bi-monthly meetings. They have been well attended having an average attendance of thirteen. They have taken in three new members who have lately come into the County.

W. K. McGill, M.D.,
Secretary & Treasurer.

DARLINGTON COUNTY MEDICAL SOCIETY

Resolutions

Whereas, we, the members of the Darlington County Medical Society wish to record the respect and esteem in which we held Dr. Joseph Coke Lawson of Darlington, S. C. who departed this life on March 25th, 1928.

Dr. Lawson was born at Oats, Darlington County, the date of his birth being July 9th, 1875. He received his medical education at the Medical College of the State of South Carolina, graduating in 1903. After serving an internship in Charleston he returned to Darlington to practice his profession.

He was married in 1910 to Miss Inez McCollough, who survives him.

Dr. Lawson's practice was wide and varied covering a large field up to the time that ill health forced him to retire from active work: Therefore be it resolved:

1st. That in his death we have lost one of our most loyal and ethical members.

2nd. That a copy of these resolutions be sent to his family, to the Journal of the South Carolina Medical Association, and that a page in the minute book of the Darlington County Medical society is hereby devoted to his memory.

O. A. Alexander,
C. C. Hill,
Committee.

Resolutions

With the passing of Dr. William Leonard Galloway, on March 5th, 1929, we are called upon to record, with sorrow, the death of the oldest member of the Darlington County Medical Society.

Dr. Galloway was born at Lydia, Darlington County, S. C., on January 28th, 1841. He attended the public schools of that section of the county, where he received his primary education.

In January, 1861, at the beginning of trouble between the North and the South, he enlisted as a private, in Company F. Eighth South Carolina Infantry. In the following spring he was elected Second Lieutenant in Company M. of the same regiment.

During his service in the Confederate Army he participated in the following engagements: First Manassas, Yorktown and Seven Days' Battle around Richmond. He was shot through the ankle at Malvern Hill, which resulted in the loss of his leg.

After returning from his service in the army he again attended the country schools for two years and read medicine under Dr. C. J. Flynn, of Darlington, for three years. From 1867-68 he attended a medical college in Baltimore. He graduated from Memphis Medical College, Memphis, Tenn. March 4th, 1869. Returning to his home at Lydia he practiced his profession there until 1892 when he moved to Darlington, where he practiced until a few years prior to his death.

He was married September 30th, 1869 to Miss Desdamona Jacobs, of Georgetown, S. C., who survives him.

Dr. Galloway was a man of lovable, Christian character and made many friends among his patients and associates.

The Darlington County Medical Society devotes a page of its records to his memory and extends to his widow and family its deepest sympathy.

The Darlington County Medical Society.

Resolutions

Whereas God in his wisdom has seen fit to take unto himself our counselor and brother, Dr. T. E. Howle, The Darlington County Medical Society herewith resolves:

1st. That we extend thanks to our Heavenly Father for the love, companionship and example of this Christian Gentleman.

2nd. That we extend thanks to our Heavenly Father for the long number of years we have been

permitted to enjoy the counsel of this man whose daily prayer was, Lord let me be of service to someone this day.

3rd. That we extend our sympathy to the bereaved widow and family.

4th. That these resolutions be included in the minutes of this meeting.

Wm. Egleston,
W. L. Byerly,
Committee.

July 25, 1929.

SOUTH CAROLINA SOCIETY OTO-LARYNGOLOGY AND OPTHALMOLOGY

The South Carolina Society of Oto-laryngology and Opthalmology met in Columbia on January 25, 1930 at eleven o'clock. The Scientific meeting was held in the Medical Building.

Dr. Fletcher D. Woodward of the University of Virginia was present and presented a very interesting paper on frontal sinus conditions and treatment. This paper was illustrated with lantern slides. It was very ably presented and many interesting facts in the diagnosis and treatment was discussed.

Dr. Woodward was well received by the society and the doctors present asked many questions on this elegant paper.

Several interesting cases were presented and discussed by members of the society, namely Dr. R. A. McDonald, Dr. Walter Bristow, Dr. E. W. Carpenter, Dr. P. V. Mikell, Dr. M. R. Mobley, Dr. C. L. Kibler, Dr. Woodward.

Those present were:

Dr. P. V. Mikell, Dr. Walter R. Bristow, Dr. C. L. Kibler, Dr. S. R. Fishburne, Dr. H. T. Timmons, Dr. R. M. McDonald, Dr. Quattlebaum, Dr. F. M. Routh and Dr. Tom Pitts, of Columbia, S. C.

Dr. John F. Townsend, Dr. George Zerbst, of Charleston, S. C. Dr. E. W. Carpenter, Dr. L. O. Mauldin, Dr. R. E. Houston, Greenville, S. C. Dr. M. R. Mobley, Dr. S. R. Lucas, of Florence.

Dr. A. T. Neeley, Newberry. Dr. G. M. Truluck, Orangeburg.

Officers of the Society are:

Dr. John F. Townsend, Charleston -- President
Dr. S. R. Lucas, Florence _____ Vice-President
Dr. George M. Truluck, Orangeburg, Sec.Treas.

After the meeting luncheon was served at the Jefferson Hotel.

Very truly Yours,
Dr. G. M. Truluck,
Sec.-Treas.

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ORIGINAL ARTICLE

DR. WILLIAM DORROH FERGUSON. AN APPRECIATION*

By Rolfe E. Hughes, M.D., Laurens, S. C.

Death has always been sad and is the most tragic culmination of life. When it takes those near to us or personal friends it's doubly hard, especially of ones own profession and a colleague. In the passing of Dorroh a chain has been severed, a connecting link between two generations of physicians, now that link is broken.

To eulogize Dorroh would not be to his liking, for it would never be his wish to sadden more than the stern fact of his passing must cause sadness to this entire club, a club which he was instrumental in organizing, active in maintaining and the center or hub from whom radiated so much for its good, optimism and worth.

So this feeble expression, impotent but genuine, sincere but spontaneous, is the outgrowth of 30 years association as a man and physician. We had closer contacts than usually exist and our differences were few and trivial in all these years, so I avoid a eulogy less friendship merge it into an elegy.

Ever a stoic philosopher, epicurean in taste, thoroughly informed, very original, he was proverbially entertaining, unusually popular and naturally very much in demand socially as well as professionally, his wisdom, counsel, naturalness and wit placed him upon a pedestal to be envied.

Despising sham, deceit and hypocracy or gestures sycophantic in nature, he was always versatile, ever alert and as much at home in the hovel of the meek and lowly, as at the brilliant aristocratic court of St. James.

A Philosopher of cheer instead of grouchy and ponderous solemunity (a rare combination) always on the bright side possessing one of the finest minds among his contemporaries, he was by nature, education and environment, eminently qualified for any line of service to which he might aspire.

Dorroh held that happiness was an enormous good
That youth was a fetish
Reason a shining torch
Justice a shrine at which to worship
And humanity a religion.

So it's no effort to consistently abide by the Roman Sage's Dictum: De Mortuis Nil—Nasi.

Therefore reverently, affectionately and sincerely, God bless his soul and grant unto him eternal rest, O Lord, and may light perpetual shine upon him.

*Address made before the Rotary Memorial Exercises, Laurens, S. C., January 29, 1930.

NEWS ITEMS

Dr. Kenneth M. Lynch represented the Medical College on the program at the Annual Congress on Medical Education, Licensure and Hospitals, held at Chicago, February 17 to 21. This was one of the most comprehensive programs ever attempted by the organization.

The recent meeting of the Tri State Medical Association held in Charleston had a large attendance and a most interesting and varied program. South Carolina was honored in the election of Dr. W. B. Lyles of Spartanburg to the Presidency.

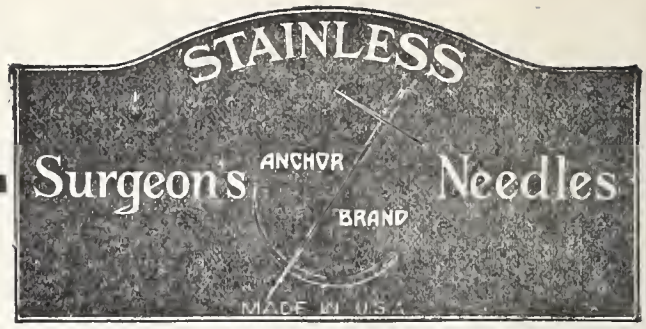
The Anderson County Medical Society under the Presidency of Dr. T. R. Gaines held a splendid meeting and banquet recently at the John C. Calhoun Hotel. Dr. Hal Davison of Atlanta spoke on Allergy and Dr. E. A. Hines, Secretary of the State Society, delivered an address on The Progress of the State Medical Association.

The Scientific Committe, Dr. Hugh Smith, Chairman, met with the President and Secretary, in Charleston, recently and arranged many of the details for the coming meeting at Florence, May 6, 7 and 8. Titles for papers have been coming in rapidly and the program is nearly complete.

Dr. George Truluck of Orangeburg has been appointed by the President, Councilor of the Eighth District, in place of Dr. J. E. Warnock, deceased.

Dr. Ben Wyman has issued an admirable Bulletin from the Department of Rural Sanitation of which he is the Chairman. This Bulletin will give the news of the various County Health Departments and be an important connecting link and source of information to public health workers and the medical profession.

Dr. G. R. Westrope has resigned as Health Officer of Lexington County and accepted an important position with the State Hospital.



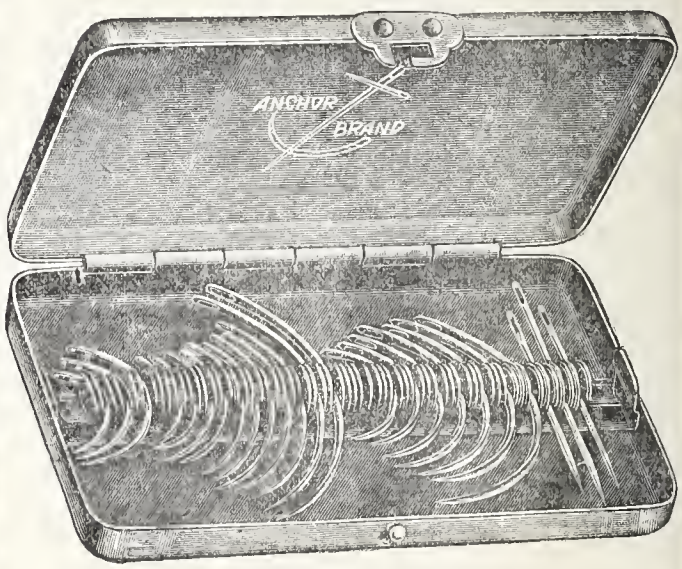
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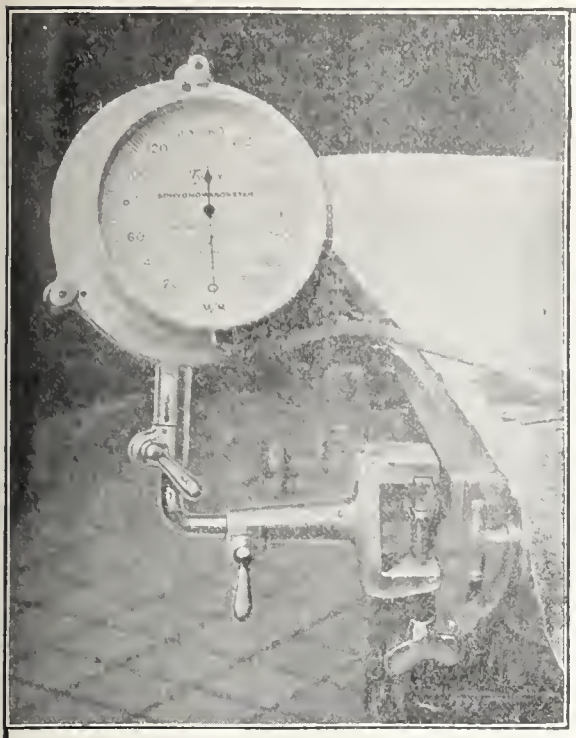
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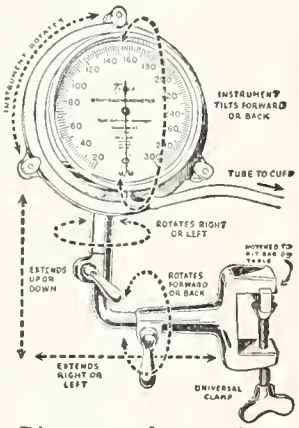


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EDITORIAL

THE TRI STATE OF THE CAROLINAS AND VIRGINIA HAS GREAT MEETING IN CHARLESTON

A large number of physicians from this and neighboring States recently met in Charleston as the Tri State Medical Association under the Presidency of Dr. Cyrus Thompson of North Carolina and from all reports the meeting was a great success. There is no better place in the South in which to hold a scientific meeting and at the same time enjoy inspiring social contacts than is Charleston. It is one of the far famed convention cities of the United States. To those who have been attending meetings there for many years it appears certain that each one is better than the last. The Tri State has grown in favor and much of this attitude is due to the energy of the capable Secretary and Editor, Dr. J. M. Northington of Charlotte. This year the Association elected Dr. W. B. Lyles of Spartanburg, President. The news of the elevation of such a worthy member of the South Carolina profession to this high position has been received with very keen pleasure by his many friends of this and adjoining States. We predict that the Tri State under his leadership will go forward to a larger membership and still better programs.

THE FLORENCE MEETING, MAY 6, 7 AND 8

The time is nearing for the State Association meeting and the program is almost complete. Elsewhere in this issue on the President's Page will be noted enthusiastic comments about the prospects ahead of us for a great convention. It is regrettable but wholly unavoidable that facilities will not be adequate to provide for the usual joint meeting with the Woman's Auxiliary. We know that the hospitality of Florence is unbounded and that they would be exceedingly interested in entertaining the doc-

tor's wives and daughters if the city had hotel accommodations. We know that Florence and the Pee Dee section have never failed to carry out an enviable program once they have been committed to it. There need be no hesitation on the part of the members of the South Carolina Medical Association in planning to attend the meeting this year. There will be a splendidly arranged scientific program and intermingled with it social features that in themselves should prove both delightful and notable. Let's go five hundred strong as has been suggested to prove our loyalty to organized medicine in South Carolina. The April issue of the Journal will be a special number giving full details of the meeting.

DR. CATHCART HONORED

It gives us great pleasure to call attention to the well deserved honor accorded one of the Ex-Presidents of the South Carolina Medical Association as noted in an editorial, February 27, in the News and Courier as follows:

An Honor Happily Bestowed

When the medical profession singles out for honors one of its own it is in form for the lay world to applaud. The Medical Society of South Carolina has, by unanimous voice, authorized the painting of a portrait of Robert Spann Cathcart, M.D., in recognition of his services to the society and to the Roper Hospital. The uniqueness of the compliment is that the society hitherto has not paid this tribute to living past presidents. His fellows in the profession have departed from an established custom of doing signal honor to Dr. Cathcart.

The growth of the Roper hospital, its intimate auxiliary, the Riverside infirmary, and the home for nurses has not been a one-man enterprise, but from days when the Roper rose on the site of the former City hospital, Dr. Cathcart has been untiring in his service toward making the institution of wider worth to the community and its neighborhood, diligently working with his associates with a purpose single of providing Charleston with the best general hospital in the Southeast.

The Medical Society of South Carolina has happily bestowed its honor. Friends of Dr. Cathcart—and all his acquaintances are numbered among his friends--are delighted with the distinction that has came to him. It is a pleasure to speak of these things in the sight and hearing of the surgeon upon whom his professional associates have placed their accolade.

PRESIDENT'S PAGE

By C. R. May, M. D., President South Carolina Medical Association

Florence, S. C.,
March 7, 1930

Dr. Chas. R. May,

Bennettsville, S. C.

My dear Dr. May:

Florence appreciates the opportunity of entertaining the South Carolina Medical Association at its approaching meeting in May. We are preparing to entertain five hundred doctors and we hope that they will all come.

The Scientific Committee has agreed to give over Wednesday night to social activities, which will be in line with our former custom, and I think one of the attractive features of the Association.

We are disappointed that our new hotel is not yet a reality, but there need not be any hesitancy on the part of any one on this account as there will be ample accommodations not only in hotels, but in the homes of our citizens for the doctors who come.

We would appreciate it if the Woman's Auxiliary would come a week or two weeks later so that we can devote more of our time to them and their entertainment than if they were to come at the time of the meeting of the State Medical Association. We are glad to have them, and anxious to have them, but it would be a little more convenient for them to come later on account of our hotel accommodations.

No doctor who has ever attended a medical meeting in Florence has said he didn't have a good time. An attractive scientific program is already assured, and the hospitable manner in which Florence is preparing to entertain the doctors will make this meeting outstanding in Florence hospitality.

With kind personal regards, I am

FHMcL:R

Sincerely yours,

F. H. McLEOD.

The above letter from Dr. F. H. McLeod, relative to the Florence meeting was highly appreciated by me, and I know that it will be well received by the members of the Association, for we all know and love Dr. McLeod and also know that he never has failed to carry out to a successful and satisfactory termination any meeting which he sponsors as host. I feel that the City of Florence, and the Florence County Medical Society, as well as the members of the Sixth District will stand solidly with Dr. McLeod that they will entertain us royally as they always have, and I believe that we will have a record attendance next May. There are many important subjects to come up at the meeting, among them some changing of the by-laws and constitution. We think that the efforts of the Officers of the Association for Greater Organization have been pleasingly successful, and hope to have a large number of new members to swell the ranks.

CHAS. R. MAY.

ORIGINAL ARTICLES

A NOTE ON THE PHAGOCYTOSIS OF DYSENTERY

By Mr. Arthur T. Brice, Jr., B.A., and Miss Mary E. McKnight, Clinical Laboratory of the McLeod Infirmary, Florence, S. C.

The Florence Sabin[1] techinc for studying the leukocytes in the living condition was set up using neutral red as the vital stain. It was found easily possible to maintain the leukocytes viable for considerable periods of time without warm stage or incubator at ordinary room temperatures, one specimen observed being viable over night. In fact the specims kept at room temperature seemed to show a higher degree of viability than those incubated at 37½ o/C between observations.

A plain bouillon culture of a Hiss-Russel Y strain of Dysentery, isolated from feces and kept in stock pure culture in the Laboratory for several months, was introduced under the cover glass with the leukocytes. An 18 to 24 hour old culture was used, two loopfuls being placed on the cover slip beside the drop of blood, and the two drops being allowed to merge after the cover slip was inverted and placed on the prepared slide. It was found easiest to observe the phagocytosis by the leukocytes near the line of merging of the two drops.

Blood from a normal control was set up in the manner described, and phagocytosis observed in several instances. The bacterium seemed attracted toward the cell and to gradually merge through the outer cell membrane. A vacuole formed in the cell protoplasm within which for a considerable period of time the bacterium continued to show Brownian movement.

Counts were made by Otani's[2] method for typhoid fever, the following figures being obtained:

From a ten minute incubation period 19% of the polymorphonuclear leukocytes showed phagocytosis of bacteria, the greatest number of bacilli ingested by a single leukocyte observed being four. From a half hour incubation period 25% of the polymorphs showed phagocytosis of bacteria, the greatest number of bacilli ingested by a single leukocyte observed being four. From an hour incubation period 83% of the polymorphs showed phagocytosis of bacteria, the greatest number of bacilli ingested by a single leukocyte observed being eight. The ten minute and half hour counts were performed on the same day, using the same 18 to 24 hour old culture. The hour count was made several days later using a different 18 to 24 hour old bouillon culture made from the same stock culture.

References

1. Sabin, Florence, R.; Bulletin Johns Hopkins Hospital vol. 34, p. 277, September, 1923.
   Described by Todd-Sanford, Clinical Diagnosis by Laboratory Methods, 6th Ed. 1927.
2. Otani, Hilario, S., and Ira, F.; Rev. Fi. med. y. farm. 16; 244, November, 1925.

INDICATIONS FOR MASTOIDECTOMY*

By J. W. Jervey, Jr., M.D., Greenville, S. C.

When I received Dr. Teague's kind invitation the question was "To do, or not to do?" Finally, I yielded to that greatest of all human weaknesses, which affects too many doctors, a desire to talk whether or not one has anything to say. At this moment, I feel acutely my youth and inexperience. Time will undoubtedly affect the former, but may it never afflict me with what we may call "cerebral stenosis" to such extent that I will fail to appreciate that there is and will ever be much to learn. I present for your consideration an old old subject, one which should be familiar to every practicing physician and surgeon, one of which much has been written by many masters, foremost among whom is my old teacher, Dr. Edward Dench, known throughout this country as the father of

*Read before the Third District Medical Society, Laurens, S. C., October, 1929.

otology. And so we proceed to a discussion of the indications for mastoidectomy.

As in every case for diagnosis, so in all mastoid cases, there are three things which must be considered in determining whether or not the patient should be subjected to mastoidectomy:

1. The case history.
2. The objective findings.
3. The laboratory aids to diagnosis.

It is hardly fair to maintain that one of these three is more important than the others, for in a given case, any one of the three may be the deciding factor in arriving at a conclusion. They are dealt with in this order as it is that in which they are naturally taken up by the examining physician.

1. The history:

In any case of otitis media beginning with an acute infectious disease, the mastoid should be regarded with suspicion. This is especially true if the exciting cause has been measles, scarlet fever, or typhoid, all of which are notoriously effective in their attacks on the middle ear and mastoid. Other diseases prone to give trouble are pneumonia and follicular tonsillitis. Dean and Marriott and Lyman have in recent years enlightened us on mastoiditis as a frequent cause in cases of uncontrollable diarrhea in infants. I have seen several such cases, and results following mastoidectomy are most gratifying. This is an intensely interesting group, and every physician will be rewarded for his efforts if he is on the lookout for such a condition. Unfortunately some enthusiasts have carried the idea too far but this should not detract from the importance of the observation.

Pain is a variable symptom and may be severe or absent. Deafness in the affected ear is an almost constant symptom but does not help in indicating the advisability or inadvisability of operating unless it has occurred with loss of both air and bone conduction, in which event a labyrinthitis is present and immediate operation *may* be indicated. Vertigo may be present and if so indicates at least labyrinthine irritation. It frequently accompanies a simple mastoiditis and clears up after mastoidectomy. Chills and sharp rises in temperature may occur, and here we must be on the lookout for sinus thrombosis. These are disconcerting signs, but do not of themselves form an indication for immediate operation. Headache in a well developed case may mean involvement of the sigmoid sinus or some intracanial complication. When present it is usually significant.

In every case of otitis media there is also an affection of the mastoid on account of the very close relationship of the attic, the antrum, and the mastoid cells. A middle ear which has been discharging for two weeks without improvement will often have to be drained posteriorly. A history of three weeks discharge almost certainly means pus in the mastoid cells, but no pedagogic rule *should* be made and no unalterable law *can* be laid down as to the exact length of time after the onset it is best to operate. Each case is a law unto itself, and we must be guided by conditions as they arise. It is well to remember that it is infinitely wiser and more conservative as regards the patient's health and hearing to operate as soon as there is indication for it, than to procrastinate with a mastoid infection which may, and probably will, lead to deafness, chronic mastoid infection, labyrinthitis, sinus thrombosis, subdural or brain abscess, or meningitis.

2. The objective findings:

The typical case warranting mastoidectomy will have a profuse discharge from the middle ear. It may reappear rapidly and in large quantity as soon as wiped away, and if so denotes pus in the mastoid as so much could obviously not come from the middle ear alone. This profuse discharge is usually one of three types either seropurulent, purulent or mucopurulent. In my limited experience with about two-hundred cases at operation, the seropurulent type is most often associated with a hemorrhagic mastoid infection, the purulent with an acute highly necrotic type, while the mucopurulent most often indicates a more or less chronic type which may reveal extensive necrosis at operation, or greatly thickened trabeculae with here and there scattered cells filled with pus or granulation tissue.

To Dench belongs the distinction of first describing what may be called the classic sign of mastoiditis, i.e., a sagging of the posterior superior canal wall adjacent to the drum membrane. This is the one sign which often of itself is sufficient evidence to warrant mastoidectomy. Along with this the drum membrane itself is

usually of a beefy red appearance and bulging out to some extent causing the canal to seem much shorter than normal, and often of a funnelled appearance. The drum membrane is thickened greatly and all the normal landmarks are gone. The handle of the malleus can not be distinguished, and the cone of light is, as we may say, extinguished.

But, unfortunately these signs are not always present. There may be no discharge, no sagging of the canal wall, no foreshortening or funnelling, and even the drum membrane itself may be of practically normal appearance. There is one point to emphasize here and that is that in such instances the normal luster of the drum membrane is diminished though it may not be entirely lost. However, the difference is enough to be noted if the normal ear is first carefully examined. This sort of membrane is frequently seen in infants with mastoiditis, the only symptom of which is an uncontrollable diarrhea and its attendant effects. But it is not limited to this type of case. I had under observation not long ago a boy sixteen years of age who was having headache and irregular chills and sweats. He had a history of having had a discharge for about two days from the right ear several weeks before I saw him. On admission the middle ears were absolutely normal except for slightly diminished luster of the right drum. Because of this, and absence of any other sign or symptom not mentioned referable to the mastoid, x-ray of the mastoids was left to the last. When finally taken they showed extensive necrosis on the right side.

Deafness out of all proportion to the signs observed in the ear often aids in establishing a diagnosis, and when it occurs with loss of bone as well as air conduction, is of grave import. Nystagmus may occur along with vertigo, and in the presence of a probable mastoid infection indicates a labyrinthitis.

Swelling behind the ear may be present, and often calls for a differential diagnosis between furunculosis, cellulitis, and edema due to infection extending from the mastoid. This edema of mastoid origin may or may not denote a cortical perforation. The x-ray is a valuable aid here in establishing the presence or absence of mastoiditis warranting surgical intervention.

Tenderness on pressure is an important point to note. Practically every case of acute purulent otitis media will have for a few days tenderness over the tip of the mastoid. As Dench again has pointed out, when this tenderness at the tip disappears and then reappears over the mastoid antrum, it is significant of real mastoid involvement. It is equally significant when it persists and becomes more and more acute. The absence of this sign, however, means absolutely nothing as a severe infection may occur beneath a thick cortex and present no evidence of tenderness on pressure.

3. Laboratory aids to diagnosis:

Leucocyte and differential counts are of little aid in deciding on operation as they are entirely too variable. The same is true of smears and cultures from the ear, although it seems to be a fact that the streptococcus is most apt to cause mastoiditis. It is found in about fifty per cent of operative cases. The pneumococcus also, especially type three, is an organism with most insidious characteristics A positive blood culture in the presence of a probable mastoiditis is highly indicative of sinus thrombosis and operation should not be delayed.

The greatest of all technical aids is the x-ray, which is invaluable. It often clears up the difficulty of distinguishing between mastoiditis and furunculosis, especially when both are present. It oten reveals a necrotic mastoid barely suspected and showing no outward signs. It is of little value however in infants where the mastoid is so poorly developed that satisfactory plates cannot be obtained, and here also the problem of immobility while small is yet immense.

In conclusion, the decision to operate on a mastoid is reached after careful attention to the usual factors concerned in making any diagnosis. The general practitioner, unless he is well acquainted with the examination of the drum membrane and its adjacent structures, is urged at the earliest moment to place his patient who has a possible mastoiditis in the hands of a competent otologist.

THE DIAGNOSIS OF PULMONARY TUBERCULOSIS

By Clay W. Evatt, M.D., Greenville, S. C.

Due to the aroused consciousness in matters of tuberculosis in Greenville County, as evidenced by the erection of our new $150,000.00 hospital, we will be called on in the future to diagnose this condition more frequently than we have ever been in the past. The figures are not yet available for 1929, but the death rate for Tuberculosis during 1928 was an increase of 25% over the death rate of the previous year in Greenville County. This to my mind is directly attributable to the financial depression in the rural and mill districts. We all know that the percentage of cures in tuberculosis is in direct proportion to the size of the pocketbook of those having the disease; further, since one in every ten deaths in the United States is caused by Tuberculosis, and most of these are due to infections of the lungs, in at least ten percent of persons, the diagnosis of tuberculosis must at some time be made, and as there are many who recover from the disease, the incidence of disease is even greater than the mortality statistics show. We are therefore impressed with the omnipresence of Tuberculosis. Tuberculosis like Syphilis should be borne in mind at all times. In most cases the diagnosis of Pulmonary Tuberculosis is, or should be very easy, but only too often it is not made by the general practitioner. Perfectly apparent symptoms are explained away by other and much less likely causes. Tuberculosis should be the first disease to be ruled out in all chest conditions.

Among some reasons why the general practitioner does not more often diagnose Tuberculosis are:

1: The literature is full of haziness, occasioned by controversies going on at all times between the various authorities on just what are the most important symptoms. A great deal of the literature is more puzzling than helpful to the general man because many writers seem to have some pet theory they are trying to advance.

2: The general man has two big objectives; first, to make a living and, secondly, to see all his patients. Therefore lack of time for a careful examination and failure to realize the universality of the infection and the frequency of the disease. Doctors in the rural districts or small towns do not examine carefully enough for it, because consumption is not thought so prevalent there as in the more crowded districts. Not enough care is devoted to the family and personal history. This together with the varied diversity in the modes of onset of the disease make for the inability of the general practitioner to understand and properly catalogue and evaluate the symptoms and signs into those of cardinal and those of secondary importance.

3: Also the doctor dislikes to tell the patient he has tuberculosis, especially if he has been the family doctor for a long time. Many times the patient, himself, suggests to the doctor from observing his own symptoms, that his lungs be examined, only to be assured by his trusted physician that there is no possibility of tuberculosis, and have found later only when too late that they were in the advanced stages of the disease.

Sometimes to make a diagnosis takes two or three weeks of close study or several return visits to the office with a close check-up on the x-ray, temperature, pulse and other symptoms and laboratory findings; even then occasionally the diagnosis must be probable rather than positive.

We must keep definitely in mind the difference between infection with tubercle bacilli which nearly every one has and which is quite compatible with good health in contra-distinction to disease caused by the said infection, which is tuberculosis, a clinical manifestation and requires treatment. Also bear in mind that one who has ever had recognizable tuberculosis will always have some pulmonary changes, all the laboratory tests may be positive and yet the individual be clinically well and stay so, to die in old age of some other disease.

Tuberculosis seems due to repeated exposures to infection or re-infection. Heredity plays a much smaller part than was formerly thought. There is no such thing as Habitus Phthisicus, the robust are just as susceptible as the thin ones.

The general symptoms are symptoms of activity rather than of disease. The following are five cardinal or localizing symptoms of tuber-

culosis; and to make a diagnosis of Pulmonary Tuberculosis one or more of these symptoms must be present:

1: Moderately coarse persistent rales above the 3rd rib and the 3rd vertebral spine. This rale is elicited as a posttussis rale. They depend not on the acuity of the listener but on how they are produced. Have the patient exhale, force a slight cough and inhale. The rales are heard sometimes at the end of expiration with the cough, but more often during inspiration just following the cough. It is very important to, and easier to show the patient how to do it than tell him to do it.

2. X-ray changes in the same area the rales are heard, i.e., upper third of the chest. It is very important to have good x-ray pictures, preferably stereoscopic. The more obscure the disease the more necessary are good x-ray plates.

3. Haemoptysis of one dram or more. There are other conditions which do sometimes cause haemoptysis, but when haemoptysis of a dram or more occurs it is tuberculosis until proven otherwise.

4. Pleurisy with effusion, likewise warrants a diagnosis of tuberculosis until some other cause is found. Dry pleurisy may and does occur at the slightest provocation. It is important however, that we see it as a warning signal and be on our guard, as so many cases of tuberculosis give a history of forgotten pleurisy in years gone by.

5. Tubercle bacilli in the sputum. When Koch first discovered the tubercle bacillus some men began to rely too much on their presence in the sputum to make a diagnosis. In many cases they are never found. This depends to a great extent on the persistence of the searcher and the concentration of the sputum for examination. However, some patients do not at any time seem to raise any sputum. One germ if accompanied by other symptoms is sufficient to justify a positive diagnosis, but if the diagnosis is dependent on that one point, three or four bacilli should be present before positive diagnosis is made. Tubercle bacilli in the sputum are not a sign of activity. Many cases arrested, inactive for years, continue to have bacilli in the sputum. The sputum should be concentrated and repeated examinations made.

The General Symptoms are those of activity rather than of disease. Fatigue, loss of weight and strength, nervousness and indigestion and, in a mental worker, the failure of the power to concentrate, are all suggestive, but not diagnostic of tuberculosis.

The General Symptoms of Tuberculosis are the same as those of many other diseases. Tuberculosis places a stigma on the patient and family. This sentiment will last at least through the present generation. When in doubt, be fair to the patient and tell him the diagnosis is probable, and that he will have to be under observation until it is possible to rule out tuberculosis—that during this period of observation his future as to health and life are being determined by the way in which he co-operates with his physician.

A cough which lasts more than three weeks, not otherwise explained, demands a careful examination for tuberculosis.

Fever in the male of more than 99, in the female of more than 99.6, pulse in the male of more than 90; female, more than 96, these figures must be exceeded four days out of seven to be considered symptoms of active tuberculosis. The general symptoms are of the greatest importance in detecting whether or not the disease is active. The analogy used by Dr. Lawrason Brown in lecturing to his students is that the localizing or cardinal symptoms correspond to the green lights on the railway and mean run slowly, while the general symptoms correspond to the red lights and mean danger lies ahead, while safety demands the side-track. Many good physicians confuse the significance of the two sets of symptoms and place too much on the study of physical signs—these tell really not what is now happening, but what has already happened.

At Trudeau this system of diagnosis is followed and mistakes of only two percent are made.

The importance in the study of tuberculosis is not what we hear, but what it means. To keep repeating, in Diagnosis the localizing symptoms are most important. In studying Activity the general symptoms are most important.

NOTE:—There is no attempt at originality in this paper. The statements are from my lec-

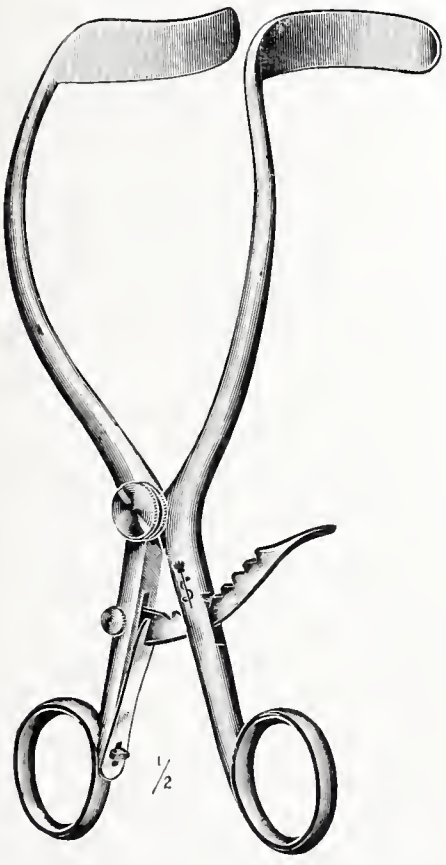
ture notes at Trudeau, and borne out by observations in my own practice.

Submitted for publication at the request of the Greenville County Medical Society February 3, 1930.

SELF-RETAINING VAGINAL RETRACTORS

By Cecil Rigby, B.S.; M.D.; F.A.C.S.; Spartanburg, S. C.

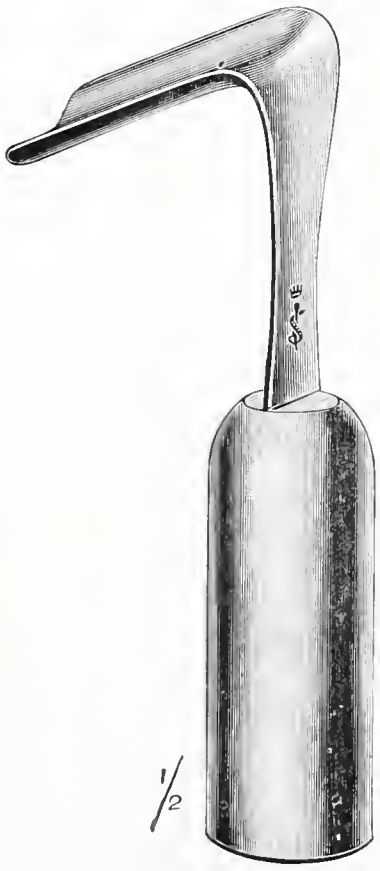
These Retractors were devised to facilitate intravaginal operations, with a smaller number of assistants, and at the same time, to give, better and more constant exposure. Patterns were made in October 1926, and gave such satisfaction, that they were turned over to the Knye-



Scheerer Corporation in October 1927. They have been making them ever since that time, although I have published no report until now.

The Retractors consist of: A posterior retractor, or weighted speculum, and a lateral Retractor. The posterior Retractor has a blade which is curved enough so it will be retained in the vagina without slipping out and which is short enough to allow generous traction upon the cervix, without misplacing it. The weight is sufficient to give proper downward displacement.

The lateral, or bivalve retractor, is so constructed, that the handle is curved to make allowance for the curves of the buttocks. The lat-



eral blades are thin enough to be easily inserted, and they have a lateral curve to snugly hold the vaginal walls apart without traumatism, and to prevent the retractors from slipping out.

These retractors may be used separately or together. They have proven very efficient in any type of intra-vaginal operative procedure.

INTERNAL MEDICINE

J. H. Cannon, M. D., F. A. C. P., Charleston, S. C.

THE DIAGNOSIS OF GONOCOCCAL ARTHRITIS WITH REPORT OF THREE CASES IN PATIENTS WITH CHRONIC RHEUMATIC ENDOCARDITIS

By O. H. Perry Pepper

(Annals of Internal Medicine October 1929)

In the diagnosis of gonococcal arthritis it is important that we disabuse our minds of some fallacies that formerly militated against the recognition of this important and not infrequet cause of disability. I have therefore abstracted Dr. Pepper's most enlightening paper and have summarized the fallacies he points out as follows:

1st—It was formerly thought that this condition caused only an ankylosing monoarticular arthritis. We now know that gonococcal arthritis is usually a polyarthritis which may so closely similate rheumatic fever as to be very difficult of differentation.

2nd—It is probable that we are still far from appreciating the frequency with which the gonococcus is responsible for arthritic phenomena.

3rd—On the other hand one may have a neiserian infection and arthritic manifestations which are not due to the gonococcus but to other organisms. Even the demonstration of the the gonococcus in prostatic secretion does not necessarily prove that the arthritis is due to the gonococcus and not to a secondary invader.

4th—One cannot usually distinguish on the basis of the arthritic picture alone between gonococcal and some instances of other types of arthritis. Thus some authorities state that there are differences in the height of the fever and its duration, in the sweating, in the leukocytosis, or in the anemia. Dr. Pepper states that none of these criteria were sufficiently constant to be helpful to him, moreover he found no difference in the range of the total white blood count nor was he able to substantiate the claim of an eosinophilia often enough to be of value.

On the other hand he emphasizes certain other considerations of importance:

1st—That all prostatitis is not gonococcal, nor need it have even started as such. It is not an infrequent focal cause for such troubles as iritis, arthritis, and neuritis (according to Pelouze, prostatitis occurs in 35% of men—it may be infected during the course of any blood stream infection such as tonsillitis, typhoid, pneumonia, etc. and act as a focus as mentioned above.)

2nd—Frequently trauma seems to determine the onset and localization of a gonococcal arthritis. Therefore in the presence of a clear story of gonorrhoea, it should arouse strong suspicion that this organism is causative. A negative history should be given no weight, not only because it is often denied but, because in the female its presence is often unknown. Far more significant is a history of leucorrhoea, pelvic inflammatory troubles or some chronological relation of arthritis to marriage or child bearing.

3rd—Age at onset deserves mention. A very young age argues against neisserian infection unless it belongs to the fortunately rare infantile group. Such cases do occur as shown by Cooperman who records an epidemic of forty-four such cases, all in infants in the same hospital ward—apparently infants readily develop gonorrhoeal arthritis from very slight local lesions.

4th—Rheumatic fever may occur at any age but, a primary attack certainly becomes less common after twenty. Also the presence or absence of tonsillitis, growing pains, chorea, or rheumatic heart disease would be of importance in the history.

5th—Sex, it is far more common in males than females. The recognition of chronic gonorrhoea is far more difficult in the female and the history far less helpful.

6th—Instead of the old mono-articular conception of gonorrhoeal arthritis and the later recognition that though polyarticular, it tend-

ed to localize in one large joint, often the knee; we now know that the temperomandibular and sternoclavicular joints are commonly involved in gonococcal arthritis and seldom if ever in rheumatic fever.

7th—There is not enough difference in the onset, the order of involvement, the number of joints involved, those involved, the duration of individual joint involvement, nor in the severity of the local symptom to permit one to make a satisfactory differential diagnosis between some instances of gonococcal arthritis and rheumatic fever, nor others from non gonorrhoeal arthritis.

8th—Dr. Pepper discusses possibilities which if correct, he believes will be of much help in understanding the variation in the manifestations:

(a)—That in an acute case of gonorrhoeal arthritis and even with the organisms in the joint, that it may react in a non-specific manner.

(b)—That in a given case of proved gonococcal infection, the arthritis may not be due to the gonococcus but to the secondary invader, strep, staph, etc. The process here would be chronic and not diflerentiable from a non gonococcus infectious arthritis arising in tonsil or sinus even tho the initial infection was gonococcal and even tho the gonococci may still persist in the focus at the time of development of the chronic infectious arthritis.

(c)—Therefore, a given focus may be the origin of the arthritis and although it may contain the gonococcus, it does not prove that the arthritis although due to that focus, is truly gonococcal. He believes this conception explains many of our difficulties such as variations in the arthritic process, in the x-ray findings, compliment fixation test, etc.

9th—Endocarditis, pericarditis, myocarditis and disturbances of rythm developing early favor rheumatic fever as the cause, while the rare instance of gonococcal endocarditis soon forces itself upon the physician. Simple infectious arthritis rarely has a cardiac complication.

10th—Compliment fixation avording to Kolmer is positive in eighty to one hundred per cent of cases—Dr. Pepper obtained only about fifty per cent positives and in three negative cases the gonococci were actually found. The reaction does not become positive until six to eight weeks and vaccines may cause a positive reading.

11th—He quotes Dr. Pancoast as recognizing two types of gonorrhoeal arthritis with the x-ray: 1st, a chronic deforming arthritis showing both hypertrophic and atrophic changes that cannot be differentiated by x-ray alone and thinks this corresponds to the non specific form referred to above. The second is analagous to the acute destructive process caused by the streptococcus or pneumococcus but a little less rapid, which in absence of serious infection by these organisms strongly suggest a gonococcal origin. A rarer type showing punched out areas that underly areas of involved cartilage and resembles the picture seen in gout. He emphasizes the importance of repeated films at intervals and their study as an aid in the diagnosis.

12th—Joint puncture:—he feels that he can add nothing to the accepted views on this procedure. That the gonococcus will usually not be found and that a piece of synovial membrane should be taken for biopsy. He cautions that the meningococsus is identical in properties with the gonococcus and does not necessarily produce a meningitis. An adjacent lymph node may be cultured and quotes Forkner who cultured the gonococcus from a lymph node in what was apparently a typical case of chronic infectious arthritis.

13th—He feels that the greater response of rheumatic arthritis to salicylates is not sufficient to be used as a diagnostic criterion and that a gonorrhoeal polyarthritis may leave no greater disability than an attack of rheumatic polyarthritis. However, should a gonorrhoeal arthritis linger in a large joint ankylosis often results and an acute infectious arthritis of any type may result in ankylosis.

14th—Dr. Pepper concludes this most instructive paper with the report of three cases of gonorrhoeal arthritis in patients having chronic valvular disease of rheumatic origin. It has long been recognized that rheumatic fever

in childhood resulted in a much greater liability to rheumatic arthritis in later life and he raises the interesting point if it does not also increase ones susceptibility to gonococcal arthritis as well. He quotes Blumer as being inclined to this belief.

SOCIETY REPORTS

MARION SOCIETY HOLDS SESSION

The Marion County Medical Society met Thursday evening, January 30, 1930, in offices of Dr. L. M. McMillan, Mullins, S. C., at 7 o'clock.

Present: Drs. D. W. Green, H. K. Jenkins, F. L. Martin, L. M. McMillian, B. M. Montgomery, J. C. Moore, N. N. Schofield, R. B. Stith, and H. B. Webb.

Dr. D. W. Green of Mullins, presided.

Program rendered follows:

1.—Report of Marion County Tuberculosis Camp—with short paper entitled "Essentials of Early Diagnosis and Treatment of Tuberculosis" —by Dr. F. L. Martin.

2.—Paper: "Resuscitation of the Asphyxiated New Born"—by Dr. H. K. Jenkins.

3—Dr. Montgomery discussed briefly certain phases of Public Health Work with especial reference to matter pertaining to relationship of Health Officer and Practitioner.

4.—Address: "Diabetes, Diagnosis and Initial Dose of Insulin"— by Dr. H. B. Webb.

These subjects were discussed with manifest interest by those present.

The election of officers for 1930 resulted as follows:

President—Dr. H. B. Webb, of Nichols.

Vice-President—Dr. R. B. Stith, of Mullins.

Secretary-Treasurer—Dr. B. M. Montgomery, of Marion.

Refreshments served upon completion of program.

B. M. Montgomery
Secretary.

RIDGE MEDICAL SOCIETY MEETING

The Ridge Medical Society met Monday, February 17, at seven o'clock with a fair attendance and with Drs. S. E. Harmon and Roderick MacDonald of Columbia as visitors.

Dr. W. T. Gibson who was away for a year in North Carolina was greeted by the Society and after expressing his pleasure at being with us again gave a resume of some of his observations while away. He also reported some interesting clinical cases of osteomyelitis and streptococcic infections which resulted fatally. His remarks on the causes and treatment of high blood pressure were new or unsual and elicited discussion.

Dr. Harmon discussed somewhat fully osteomyelitis and streptococci infections.

Various ones made short reports of diseases which were due to infections (local).

Dr. MacDonald gave an instructive and interesting talk on psycho neurosis, which all considerer really worth while.

Dr. G. A. Westrope having moved to Richland County resigned as a member of our Society and was given a certificate of commendation. He had attended our meetings regularly and added greatly to the interest in them by usually furnishing us violin music of a high order at our luncheons, etc.

The President and others agreed to see some of our non attendants and try to interest them in our meetings.

Supper was served at the Commercial Hotel.

The Ladies Auxiliary met with Mrs. Dr. E. C. Ridgell. It meets at the same time the Society does and occasionally we met jointly.

Dr. W. P. Timmerman, who is one of the Councilors of The Tri State Medical Association attended its meeting in Charleston the eighteenth and nineteenth of February.

The Leesville Infirmary has been discontinued. No announcement has been made as to what disposition will be made of it.

W. P. Timmerman, M. D.,
Secretary.

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL TUESDAY EVENING, FEBRUARY 11th, 1930, AT 8:30 O'CLOCK

The meeting was called to order by the Vice-President, Dr. H. W. de Saussure. During the temporary absence of the Secretary, Dr. W. H. Prioleau acted in this capacity.

Present: Doctors: Allen; Beach; Beckman; Burn; Cannon; de Saussure; Finger; Jackson; Jenkins; F. B. Johnson; Kollock; Mazyck; O'Driscoll; Palmer; F. R. Price; Prioleau; R. B. Rhett; Richards; Rutledge; W. A. Smith; I. R. Wilson; Robert Wilson; Zerbst; Whaley; W. H. S. Speis-

segger; Hope; I. R. Wilson, Jr.; Sughrue; Sams; Bold. (30).

Guests: Dr. Roe E. Remington, internes and senior medical students.

The minutes of the meeting of January 28th were read and confirmed.

The Secretary read a letter from Mr. T. W. Thornhill, Chairman of the Historic Floats Parade and Pageant Committee for the celebration of the 250th anniversary of the establishment of Charleston. This letter requested the Society to take part in the celebration on this occasion, by having a float in the parade. It was moved, seconded, and carried that the Society be represented in the floats parade and that the President appoint a committee to select an appropriate subject and make necessary arrangements for participating in this celebration.

Dr. Franklin F. Sams was present and signed the constitution.

The Scientific Program was called at 9:00 P. M.

Dr. Charles W. Kollock read a paper on "Injuries to the Optic Nerve." This was discussed by Drs. P. G. Jenkins, G. H. Zerbst, and others, Dr. Kollock closing.

There being no further business, the meeting adjourned.

W. Atmar Smith, M.D.,
Secretary.

LAURENS COUNTY MEDICAL SOCIETY MEETING

The Laurens County Medical Society met on the afternoon of January 27 at Dr. S. C. Hays Hospital in Clinton.

The President, Dr. R. E. Hughes, called the meeting to order with the following doctors present: Drs. Hayes, Young, Davis, Shealy, Teague, O'Daniel, Martin, Bailey and Whitter.

The society was very fortunate in having with them at this time four distinguished specialists from Greenville, namely Drs. E. W. Carpenter, H. D. Wolfe, J. D. Guess and Blakely.

Dr. Carpenter, being the main essayest of the afternoon related in a very eloquent and interesting way, a practical discussion of some of the nasal sinus problems. He stated that the major portion of the primary foci of infection were located somewhere along the respiratory tract. He further stated that with a new procedure, namely, that of displacing the air in the accessory nasal sinsuses with some Lipiodol substance they were enabled to discover pathology in many of the cases that were heretofore overlooked. Dr. Carpenter illustrated his talk with latern slides.

At the conclusion of Dr. Carpenter's talk, Dr. H. D. Wolfe reported two very interesting cases—illustrating with pictures. 1. That of a supracondylar fracture with secondary gas bacillus infection that necessitated amputation, and 2 that of a syphilitic periostitis of humerus, which was first thought to be an osteo-genetic-sarcoma. These papers were discussed by Drs. Teague, Blakely, Guess and Hayes.

Dr. F. K. Shealy then presented a patient with case history. This case was unusual in that it presented a rare syndrome of symptoms, probably the most oustanding of which were two attacks of transient blindness with practically negative eye ground findings. The case was freely discussed, but passed up as undiagnosed.

Dr. T. L. W. Bailey suggested that the Society express an opinion as to the Publicity Bureau of the State Board of Health. Dr. Teague made motion that Society go on record as favoring this bill. This was duly passed by the Society.

At the conclusion of the business session the following officers were elected to serve during the year 1930.

President, Dr. R. E. Hughes, re-elected, Laurens, S. C.

Vice-President, Dr. J. Lee Young, Clinton, S. C.

Sec. & Treas., Dr. R. L. Martin, Goldville, S. C.

Delegates to State Convention, Dr. Jno. O'Daniel, Laurens, S. C.; Dr. F. K. Shealy, Clinton, S. C.

Alternates, Dr. J. Lee Young, Clinton, Dr. F. S. Webb, Clinton.

There being no further business the Society adjourned after the President had very appropriately thanked the visitors for their helpful contributions to the afternoon's program.

R. L. Martin, M.D.,
Sec.-Treas.

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL TUESDAY EVENING, JANUARY 28th, at 8:30 O'CLOCK

The meeting was called to order by the President, Dr. J. Sumter Rhame.

Present: Doctors: Allen; A. E. Baker, Jr.; Beach; Beckman; Buist; Burn; Byrnes; Cain; Cannon; Chamberlain; Deas; Finger; Jackson; Kollock; LaRoche; Lynch; McCrady; Maguire; Martin; Mitchell; O'Driscoll; Palmer; F. R. Price; Prioleau; Ravenel; Rhame; R. B. Rhett; W. M. Rhett; Rutledge; Sanders; J. E. Smith; W. A. Smith; Townsend; Waring; Wild; I. R. Wilson; R. Wilson; Whaley; W. H. S. Speissegger; Hope; I. R. Wilson, Jr.; Sughrue. (42).

Guests: Dr. Hugh Smith, of Greenville, S. C.; Dr. Edgar Thompson, U.S.N.; Dr. P. M. Temples, of the Medical College; hospital internes and senior medical students.

The minutes of the meeting of January 14th were read and confirmed.

The Board of Censors having reported favorably on the application for membership of Dr. Franklin F. Sams, and favorably on the applications for reinstatement of Dr. F. H. Bold and Dr. G. H. Zerbst, ballots were taken, and these physicians were elected to membership in the Society. The President instructed the Secretary to notify them of their election and to request that they be present at the next meeting in order that they may sign the constitution.

The Secretary read a letter from the district manager of the Southern Bell Telephone and Telegraph Company calling attention to the fact that in the next issue of the telephone directory a special feature has been adopted whereby physicians will be listed in the classified column, and by the payment of the small fee of twenty-five cents per month, the address and office hours will be included. It was moved, seconded, and carried that the Society does not disapprove of its members' names appearing in the classified column of the telephone directory, with their addresses and office hours also recorded.

Dr. Lynch, Chairman of the Committee on Public Health and Legislation, stated that his committee had written to the President of the State Medical Association of North Carolina in connection with the Workmen's Compensation Law, which is up for passage in a bill presented to the state legislature, and that he had received a letter in reply, in which it was stated that no fee schedule was included in the North Carolina bill, but that this letter had been arranged by a special commission, on which the North Carolina State Medical Association was represented. The law was said to be working very satisfactorily in North Carolina. Dr. Lynch said he forwarded this letter to the Chairman of the committee of the South Carolina State Medical Association, who was endeavoring to secure facts about the compensation law and its relation to the medical profession of South Carolina.

Under Miscellaneous Business, the Secretary brought to the attention of the Society the fact that he was endeavoring to secure photographs of all former presidents of the Medical Society, his idea being to gather these photographs in a volume in which there will be a sketch of the life of each. He suggested that an album suitably arranged might answer this purpose. He requested that the President appoint the Library Committee to assist him in gathering the photographs and data. He also pointed out that it might entail some expense to make copies of some needed photographs, and moved that the Secretary be permitted to expend such funds as may be necessary to make the collection complete. Seconded and carried.

The President directed that the Library Committee cooperate with the Secretary in this matter.

The Scientific Meeting was called at 9:00 P. M.

A medical case report was made by Dr. Robert Wilson. This was a case of cholecystitis and cholelithiasis, which had presented an interesting problem in diagnosis and therapy. The report was discussed by Drs. Buist, Lynch, Kollock and Prioleau, Dr. Wilson closing.

The paper of the evening was read by Dr. Hugh Smith, of Greenville, S. C., on "Cholecystitis, with special reference to its incidence and its recognition." Dr. Smith showed roentgenograms illustrating the value of the dye in gall-bladder disease. This very able and interesting paper was discussed by Drs. Prioleau, Chamberlain and F. R. Price, Dr. Smith closing.

There being no further business, the meeting adjourned.

W. A. Smith, M.D.,
Secretary.

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL TUESDAY EVENING, JANUARY 14th, 1930, at 8:30 O'CLOCK

The meeting was called to order by the President, Dr. J. Sumter Rhame.

Present: Doctors: A. E. Baker, Jr.; B. R. Baker; Ball; Barnwell; Beach; Buist; Burn; Byrnes; Cathcart; de Sassure; Finger; Jackson; E. B. Johnson; Kollock; Lynch; McCrady; McInnes; Maguire; Mitchell; Mood; O'Driscoll; Palmer; W. H. Price; Ravenel; Rhame; R. B. Rhett; Richards; Rutledge; Sanders; Scott; W. A. Smith; C. A. Speissegger; Taft; Townsend; Waring; Wild; Robert Wilson; W. H. S. Speissegger; Hope; Sughrue. (40).

Guests: Dr. Cyrus Thompson, President of the Tri-State Medical Association, and Dr. J. M. Northington, Secretary of the Tri-State Medical Association; Captain Edgar Thompson, U.S.N.; Dr. C. B. Woods; internes, and senior medical students.

The minutes of the meeting of December 10th were read and confirmed.

The Secretary presented the application of Dr. Franklin F. Sams for membership in the Society, and applications for re-instatement from Dr. F. H. Bold and Dr. G. H. Zerbst. These were referred to the Board of Censors.

Under Reports of Officers and Committees, Dr. R. S. Cathcart, Chairman of the Committee on Ross Estate, submitted a detailed report of the activities of this Committee.

Dr. R. S. Cathcart, Chairman of the Board of Finance, then submitted the annual report of this Board. The report is as follows:

January 4, 1930.

To the President and Members of the
Medical Society of South Carolina

Gentlemen:

The Board of Finance beg leave to submit this, their annual report.

We are charged with the audits of the books of all officers and committees having charge of receipts and expenditures of all monies for the Society.

According to our custom we have had a certified audit of the books of the officers and committees and submit, with this, as our annual report, the certified reports of the Auditor, as follows:

An audit of the books of the Board of Finance;

An audit of the books of the Committee on Ross Estate;

An audit of the books of the Treasurer of the Medical Society;

A report regarding the Minute Book of the Secretary of the Board of Finance.

Your Board would call your attention to the fact that the Society last January adopted the recommendations of this Committee that beginning in January 1930 the Board of Commissioners of the Roper Hospital return to us certain funds for the purpose of reimbursing the Kings Daughters donation of $9,000.00 and part of the original Roper Bequest. We look to the Board of Commissioners to put this action into effect from this date.

Respectfully submitted,

Edward F. Parker, Secty.
G. McF. Mood, Treas.
R. S. Cathcart, Chairman.
J. S. Rhame, M. D., Pres. Ex-officio.

It was moved, seconded and carried that the report be received as information and spread on the minutes, and that the Society's appreciation be extended to the committee for the excellent services rendered during the past year.

The Scientific Meeting was called at 9:30 P. M.

Dr. R. B. Taft gave an interesting discussion of the mode of teaching Roentgenology in Vienna. He also showed in interesting moving picture portraying the method of pointing out the rugae of the stomach.

Dr. O. B. Chamberlain gave an illuminating talk on the methods of teaching neurology in one of the large London neurological hospitals.

Dr. Cyrus Thompson, President of the Tri-State Medical Association, on being introduced by the President, gave a short address and urged all members of this Society to attend the forthcoming meeting of athe Tri-State Medical Association, which would be held in Charleston in February.

Dr. J. M. Northington, Secretary of the Tri-State Medical Association, was also called upon and he, too, extended an invitation to this Society to join the Tri-State Association, or if not to join, to attend as guests of the Society at their annual meeting in February.

At the completion of the Scientific Program, the President resumed the regular order of business, and under Miscellaneous Business he announced the appointment of the following committees for the ensuing year:

Committee on Public Health and Legislation

Dr. K. M. Lynch, Chariman.
Dr. P. W. Sanders
Dr. J. I. Waring

Program Committee

Dr. J. H. Cannon
Dr. O. B. Chamberlain
Dr. T. E. Bowers
The President and the Secretary, Ex-officio.

Library Committee

Dr. W. C. O'Driscoll, Chairman
Dr. Robert Wilson
Dr. R. L. McCrady

Medical Milk Commission

Dr. W. M. Rhett, Chairman
Dr. Sylvia Allen
Dr. M. W. Beach
Dr. T. H. Byrnes
Dr. G. F. Heidt

Committee on Investigation of Charity Services

Dr. J. W. Burn, Chairman
Dr. Edward Rutledge
Dr. F. G. Cain
Dr. O. B. Chamberlain
Dr. I. R. Wilson
Dr. K. M. Lynch

Dr. J. H. Cannon brought up the matter of the Workmen's Compensation Law, which is now being discussed in the State Legislature. After some discussion on this matter, in which Drs. Lynch, Robert Wilson, Thompson and Northington took part, it was moved that the Committee on Public Health and Legislation secure all information as to the progress this bill is making and its effect upon the medical profession, in order that they be in a position to advise the Society of any developments which might be unfavorable to the profession. Seconded and Carried.

There being no further business, the meeting adjourned.

W. Atmar Smith, M. D.,
Secretary.

REGULAR MONTHLY MEETING OF ANDERSON COUNTY MEDICAL SOCIETY HELD AT JOHN C. CALHOUN HOTEL AT EIGHT P. M. FEBRUARY 12, 1930

The regular meeting of the Anderson County Medical Society was held February 12, 1930 at 8 P. M. at the John C. Calhoun Hotel. Dr. Thos. R. Gaines President presiding over the meeting.

Under the head of business Dr. J. N. Land, read resolutions before the Society asking that a Veterans Bureau Hospital be erected in South Carolina for the care and treatment of disabled Veterans of the world war, who have been unable to get treatment due to lack of hospital facilities here-to-fore. A motion was made and carried, that the resolutions be adopted and the Secretary requested to send the resolutions to Congressman, Fred H. Dominick, for further attention, asking for help with this matter.

Dr. J. R. Young made a motion and it was carried that Anderson County Medical Society pay the Committee's expenses for interviewing the legislature, in regard to the appropriation for the Anderson County Hospital, also asking the committee to make a report before the Society. Dr. J. N. Land, chairman of the committee reported $5,000 (five thousand dollars) being appropriated for this cause.

Dr. E. A. Hines, Sr., Seneca, S. C., gave a short talk on "Scientific Medicine and Its Progress." Dr. Hines asked that the members especially attend the second day of the Annual Meeting at Florence, S. C., May 6, 7, 8, 1930.

Dr. E. A. Hines, Jr., also of Seneca expressed his pleasure of being with the Society at this meeting.

Dr. Hal. M. Davison Atlanta, Ga., was the principal speaker of the evening and presented a very interesting paper, his subject being, "Allergy; Its Relation to General Medicine." This subject being very interesting and instructive was enjoyed to the fullest by all present.

Luncheon was served in the hotel dining room.

Members present, 35.

Visitors present, 3.

D. J. Barton, M. D.,
Secretary-Treas.

REGULAR MONTHLY MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY HELD IN THE LECTURE HALL, CITY HOSPITAL, FEBRUARY 3rd, 1930

The meeting was called to order by the President, Dr. Guess at 8:00 P. M. with about thirty-five members present.

The minutes of the previous meeting were read and approved.

Reports of clinical cases were then called for. Dr. Sanders reported a strange pneumonic condition; discussed by Dr. Goldsmith, who stated that the case was that of a child 16 months old, who developed a high fever, but revealed no pathology in the lungs. The patient became better suddenly, then developed a pneumonia, followed by a pneumococcic meningitis and death.

Dr. Davis reported a case of double ureter, stating that he was in the midst of an "epidemic" of this anomaly.

Dr. Fair reported a case of purpura haemorrhagica in a boy 15 years old with abdominal symptoms; a diagnosis of appendicitis could not be made. Thinking that the patient did have a bad appendix, appendectomy was performed. Transfusion was necessary. Dr. Fair stated that he could not report the outcome of this case as yet, and added that the boy would have his good days and his bad days.

The first essayist was then called upon, and Dr. Murray presented an admirable paper on "The Management of Lobar Pneumonia." From the therapeutic standpoint, Dr. Murray stated that much work had been done of late, but all of it, at the present time is merely experimental. It was mentioned that a great deal of discussion has arisen over the use of digitalis therapy; certain sera may be of value in certain cases. There is a tendency to overtreat pneumonia. Rest is the principal therapeutic measure at present, and patients should not be moved after a diagnosis has been made. Codeine is a valuable drug; sedatives in general should be withheld. Oxygen inhalations over long periods of time may be of value in off-setting anoxaemia. The cardio-vascular system should be supported. Pneumonic deaths usually result from respiratory failure, but cardiac deaths do occur.

Dr. Murray mentioned that Randolph claims that cardiac stimulants use up the heart reserve too fast. A lower mortality has been observed in those not receiving digitalis. Failure of the myocardium is thought to be a terminal phenomenon. With the appearance of myocardial failure, digitalis may be of value at this late stage. Hydrotherapy may be of value; posterior pituitary may be given to maintain blood pressure.

Recurrent attacks in patients are usually due to other types of pneumonia. Sera are of value if given early. Types I and II sera are of value; Types III and IV are of no value as yet. Discussed by Drs. Carpenter, Wilson, Wilkinson, Bruce, Earle, Wolfe, W. S. Fewell, Davis; closed by Dr. Murray.

Dr. Evatt was then called upon, who read a very able paper on "The Diagnosis of Tuberculosis."

Tuberculosis should be born in mind at all times and should be the first disease to be ruled out in possible chest conditions. Chest examinations, at the present time are not thorough enough.

The diagnosis of tuberculosis may require much time and thought. The cardinal symptoms of tuberculosis were then outlined and mentioned as follows:

1. Moderately coarse, persistent, post-tussive rales in the upper chest.
2. X-ray changes over the rale-area.
3. Hacmoptysis of one drachm or more of blood.
4. Pleurisy with effusion; dry pleurisy may occur.

5. Bacillus tuberculosis in the sputum; the organisms are never found in many cases. Sputum should be concentrated whenever considered necessary. Some cases may have positive sputum and not be active.

A cough of over three weeks duration should be accounted for if possible; temperature over 99 and 99.6 is significant. Dr. Evatt then stated that too much emphasis is placed on physicial findings rather than on symptoms. Discussed by Drs. Wilkinson, Brown; closed by Dr. Evatt.

Dr. Carpenter moved that these two papers be published in the State Medical Journal; seconded and carried.

A letter from Dr. Frank E. Kitchen, President of the Southeastern Veterinary Medical Association was read, inviting members of the County Society to attend the annual meeting of this Association in New Orleans, in February if possible. It was moved, seconded and carried that Dr. Kitchen's letter be acknowledge with appreciation.

There being no further business, the meeting adjourned.

I. S. Barksdale, M.D.,
Secretary.

COLUMBIA MEDICAL SOCIETY MEETING IN THE MEDICAL SOCIETY HALL, MONDAY MARCH 10, 1930 AT 8:30 P. M.

First Regular Scientific Meeting of Month.

1. Optic Fungus as Aid to General Diagnosis.—Dr. J. W. Jervey, Greenville, S. C.
   Discussion opened by—Dr. Walter Bristow and Dr. J. Heyward Gibbes.
2. Survey of Gastric and Duodenal Ulcers.—Dr. O. B. Mayer.
   Discussion opened by—Dr. J. H. Taylor and Dr. F. E. Zemp.

J. Heyward Gibbes, President — William Weston, Jr. Secretary.

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South Carolina Medical Association

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First Vice-President, Mrs. L. O. Mauldin ..... Greenville
Second Vice-President, Mrs. Carl B. Epps ..... Sumter
Recording Secretary, Mrs. C. W. Evatt ..... Greenville
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Treasurer, Mrs. J. W. Bell ..... Walhalla

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District 2. Mrs. Ernest Cooper, ... State Park, Columbia
District 3.
District 4. Mrs. F. G. James ..... Geer
District5 .Mrs. A. W. Humphries ..... Camden
District 6.
District 7. Mrs. D. O. Winter ..... Sumter
District 8.

I am sorry that lack of space makes it necessary to give the report of Miami by speaking generally.

The Sixth Annual Meeting of the Woman's Auxiliary to the Southern Medical Association was held in Miami, Florida, November 19-22, 1929. Mrs. C. W. Garrison of Little Rock, Arkansas, president, presided.

The members of the Auxiliary to the Dade County Medical Association served as hosteses. Mrs. Arthur L. Walters of Miami Beach was chairman of the Committee for Ladies' Entertainment.

Never have the members of the Auxiliary been so graciously received by a hostess Auxiliary which was more anxious to do everything possible for the visitors and who proved more capable of gratifying every wish. No detail for the comfort and success of the meeting was ever neglected at any time.

Miami is an ideal gathering place in every sense of the word—and has the most pleasant climate for a convention in the United States. The entertainment consisted of motorcades around the city, Beach, and beautiful Coral Gables; beach parties, luncheons, and teas. Each entertainment was pronounced by all a wonderful success.

From the standpoint of attendance, accomplishment, and cooperation, the Miami Convention of the Auxiliary to the Southern Medical Association was considered the best in its history. The day session was held on the mezzanine floor of the Columbus Hotel. The luncheon took place at one P. M. on the Roof Garden of the Columbus Hotel At this time a most helpful address was delivered by Dr. Seale Harris of Birmingham, Alabama. His subject was—"The Woman's Auxiliary and Nutritional Clinics."

The reports from each Southern State was very inspiring. Each showed that much work is being done along health lines by the Auxiliary.

South Carolina measured up in every way to the standard in her report. A resume of the work of the state organization was given and special attention called to the raising of funds for the Sims Memorial. There were in Miami twenty-five members of Auxiliary, which made us proud of our state.

Mrs. James N. Brawner of Atlanta, Georgia is the new president. We know she will prove a most successful president. She is not new in this work, having held many state offices before.

As I have said in the beginning this convention is outstanding for its far-reaching accomplishments, its spirit of cooperation, its oneness of purpose and its brilliant hospitality. All who attended came away the richer for their going. The only regret is that each member of Auxiliary to the South Carolina Medical Association could not be there at this time.

Mrs. L. O. Mauldin,
Vice-President, A. S. C. M. A.

I have been asked to write a letter for the South Carolina Medical Journal from the Richland County Medical Auxiliary.

I feel that there are so many things that I would like to discuss that it is hard to know where to begin, but this I can assure you that what I shall write will be brief.

There are so many possibilities in our auxiliary if we will only pull together. Recently I have had the pleasure of meeting and being with Mrs. Redd of Texas who founded the auxiliary and to know her is an inspiration. She possesses great charm of manner and is profoundly interested in all that pertains to the betterment of medical matters. Above all she possesses warmth of heart which comes from within.

Our president of the National Auxiliary last year was Mrs. Allen Bunce of Atlanta, Georgia, and we Southerners were very proud to have her preside with so much grace, tact and ability.

Mrs. Hoxy of Missouri is our National president this year. She is a woman of the keenest intellect and really desires to do what is best for the auxiliary. She is willing to help us at any time for advice or any other information.

We all know our South Carolina president, Mrs. Waller H. Nardin, and how desirous she is to have us get together and move onward as one. If all the doctor's wives would join the auxiliary think how much would be accomplished and what it would mean to our president. We must try to get every woman who does not already belong to join.

The members of the auxiliary in Columbia recently held a reception after the meeting of the County Medical Society. Dr. Finney of Baltimore was the guest of honor. He was highly pleased with the reception and every one enjoyed meeting him and talking to the doctors and their wives. It is surprising how many matters of common interest were discussed. We believe such meetings will accomplish much good.

The question has been agitated from time to time as to what the wives of physicians could do to promote the public welfare. Recently the suggestion has been made that we undertake to promote the use of South Carolina fruits, vegetables and milk since it has been shown that they possess superior food value. This it seems to me is a most practical suggestion because in addition to promoting our own health and that of our neighbors, it will exercise an important influence in promoting the prosperity of our people, particularly the farmers. It seems to me that we are in a peculiarly favorable position to undertake a campaign by which all the women's organizations of the State might be brought into one agreement to use only South Carolina produced fruits, vegetables and milk wherever they are available and where not available inquire the reason why.

A short time ago I had the privilege of eating some soup made at the Columbia Children's Clinic, such as is made each day for the children at the free kindergarden and which was composed entirely of South Carolina grown vegetables. It was delicious and evidently most wholesome.

I earnestly suggest that we undertake to get all the schools, boarding houses and hotels in South Carolina to use South Carolina grown vegetables. Think what it would mean to the farmers besides the satisfaction of knowing that what we grow is better than is grown elsewhere.

Let us buy our South Carolina butter and vegetables—the best ever.

Elizabeth V. Weston.
(Mrs. William Weston.)

The Woman's Auxiliary to the Richland County Medical Society entertained the Richland County Medical Society and their honored guest Dr. J. M. T. Finney, professor of Clinical Surgery at John Hopkins. The reception was held in the assembly room at the Medical Building. At one end of the beautifully appointed table Mrs. Theo. DuBose, Sr., the first president of the Auxiliary, poured cocoa, at the opposite end Mrs. Geo. Bunch, the president poured coffee. A beautiful silver basket filled with lovely cream and rose-pink snap-dragons interspersed with yellow narcissi made a charming centerpiece. Yellow candles burned in silver candelabra lending a warm glow to the festive scene.

The committee, Mrs. William Weston, Mrs. Frank Durham, Mrs. William Boyd, Mrs. Arthur Shaw, Mrs. Joe Dillard and Mrs. Roger Daughty were assisted by other members of the auxiliary in serving delicious sandwiches and cake.

BOOK REVIEWS

A TEXT ON ORTHOPEDIC SURGERY. By Willis C. Campbell, M D , F.A.C.S., Professor of Orthopedic Surgery, University of Tennessee, College of Medicine. Memphis. Octavo volume of 705 pages, with 507 illustrations. Philadelphia and London: W. B. Saunders Company, 1930. Cloth, $8.50.

TREATMENT IN GENERAL PRACTICE. By Harry Beckman, M.D., Professor of Pharmacology, Marquette University Medical School, Milwaukee, Wisc. Octavo volume of 899 pages.. Philadelphia and London: W. B. Saunders Company, 1930. Cloth, $10.00 net.

THE SURGICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month.) Volume 9, number 5. (Philadelphia Number—October, 1929) 299 pages with 111 illustrations. Per Clinic year (February 1929 to December 1929.) Paper $12.00; Cloth, $16.00. Philadelphia and London: W. B. Saunders Company.

THE MEDICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month.) Volume 13. No. 4. (Philadelphia Number, January 1930). Octavo of 301 pages, illustrated. Per Clinic year, July, 1929 to May, 1930. Paper, $12.00; Cloth, $16.00 Net. Philadelphia and London: W. B. Saunders Company.

THE MEDICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month.) Volume 13, No. 3. (New York Number, November 1929.) Octavo of 272 pages with 58 illustrations. Per Clinic year, July, 1929 to May, 1930. Paper, $12.00; Cloth, $16.00 net. Philadelphia and London: W. B. Saunders Company.

THE SURGICAL CLINICS OF NORTH AMERICA. Issued serially, one number every other month.) Volume 9, number 6. Lahey Clinic Number—December 1929). 188 pages with 51 illustrations, and complete Index to Volume 9. Per Clinic year (February 1929 to December 1929.) Paper, $12.00; Cloth, $16.00. Philadelphia and London: W. B. Saunders Company.

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NEWS ITEMS

The Greenville County Medical Society will hold a meeting at eight o'clock, March 28, in honor of Dr. Paul White, the distinguished Cardiologist of Boston. Invitations have been extended to the physicians of the nearby counties to be present at the banquet and to hear Dr. White. It is desired that prompt response to these invitations be sent to Dr. Irving Barksdale, the Secretary, in order that it may be known just how many plates to prepare.

The Staff of the Spartanburg General Hospital held an interesting meeting at the hospital on the evening of March 14. Dr. George Wilkinson of Greenville addressed the Staff on the subject of Diabetes. Dr. E. A. Hines, Secretary of the State Medical Society, spoke on the progress of standardization of hospitals and the place of the Staff meetings in the general scheme of scientific progress. Dr. Edgar A. Hines, Jr., outlined the importance of the close relationship that should exist between the hospital Staff and the internes.

The Spartanburg General Hospital is in the midst of extensive plans for enlarging the facilities for the care of the sick and for the public health in the county. A new hospital for negroes is now in course of construction. Plans for the new tuberculosis hospital are well under way and a clinic building costing thirty-four thousand dollars has also been provided for. Dr. J. M. Beeler, is the Superintendent and there is a Staff of thirty-four members.

The Anderson County Medical Society held a meeting March 12, at which Dr. J. N. Land read a paper on Conservation Gynecology and Dr. Frank Wrenn on Uterine Hemorrhage.

The Oconee County Medical Society met at Walhalla on Tuesday, March 11, and elected Dr. J. S. Stribling, seneca, as President and Dr. E. A. Hines, Seneca, Secretary-Treasurer. Drs. E. A. Hines and E. A. Hines, Jr., presented a paper on Perforated Meckel's Diverticulum. The next meeting will be at Seneca at which the Councilor of the District, Dr. R. C. Bruce of Greenville, will be the guest of honor.

Dr. D. E. Peek, proprietor and operator of the Six Mile hospital, left Saturday, March 8, for New York where he takes post graduate study in medicine and surgery each year.



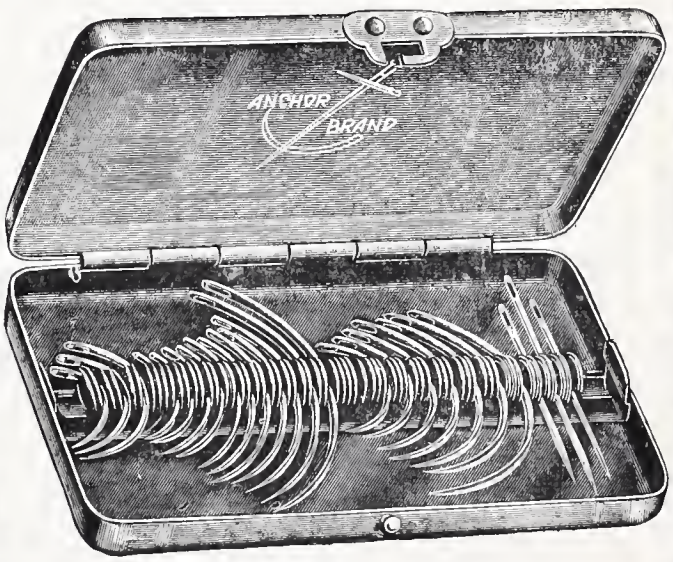
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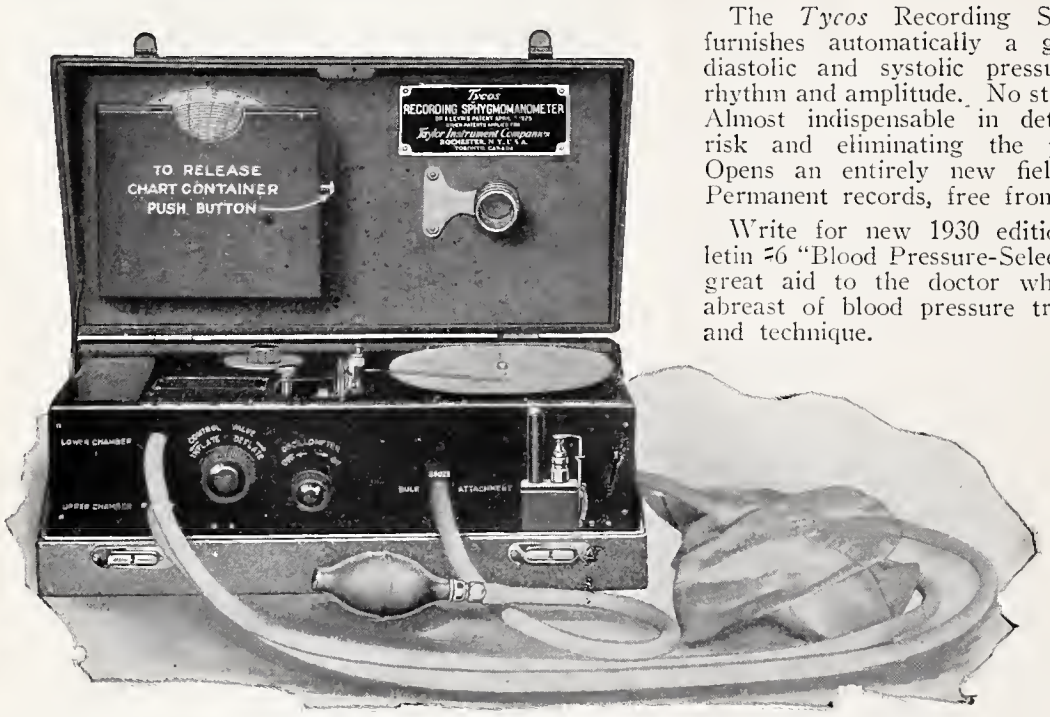
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OF THE

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EDITORIAL

TUBERCULOSIS

In this issue of the Journal stress is being placed on childhood tuberculosis because the National Tuberculosis Association has selected the month of April in which to focus attention on the disease. The phenomenal success of the concentrated effort to stamp out tuberculosis inspires the medical profession to hope for similar results in the campaign against cancer and cardio-renal diseases which so far appear to be on the increase. It is fitting then that we should profit by the methods hitherto pursued in the prevention and control of tuberculosis. There is a world wide interest in the health of the child at the present time. South Carolina stands well to the front in the matter of providing facilities for the treatment of tuberculosis by the State in the splendid institution at State Park and by the more progressive counties. Greenville county is building a magnificient hospital and also Spartanburg and probably other counties. In this connection the program of the South Carolina Medical Association at the Florence meeting will emphasize Tubeculosis in a Symposium. This will be the chief feature of the meeting. There will be an exhibit provided by the National Tuberculosis Association cooperating with the South Carolina Tuberculosis Association and the local committee.

AN APPEAL FOR THE SECOND DAY'S ATTENDANCE

In the course of the years for no special reason there has been a growing intensity of interest in the program of the first day of the scientific session. Some effort was made by the Scientific Committees to avoid this and to so arrange the program that all the best papers would not come on the first day. Little success attended these efforts in holding the crowd.

At the Charleston meeting last year the attendance toward the last was pitifully small. Immediately following the fall of the gavel closing the meeting the officers and the scientific committee determined to make every effort to so balance the program that it would be as compelling in interest on the second day as on the first. A great deal of thought has been given to this problem with the hope that the tide will be turned at the Florence meeting. A large number of the essayists have been invited to present papers by the Scientific Committee. The volunteer papers this year are also particularly good. It would seem therefore that the members of the South Carolina Medical Association should support the program committee to the limit by staying over the second day until the meeting closes. By a little thought and planning beforehand this can be done with rare exceptions. Such action on the part of the membership will show a loyalty which we know exists but which we would like to see fully demonstrated by their presence. The complete success of the plans outlined above would mark an epoch in the annals of our Association and encourage officers and program committees for a long time to come.

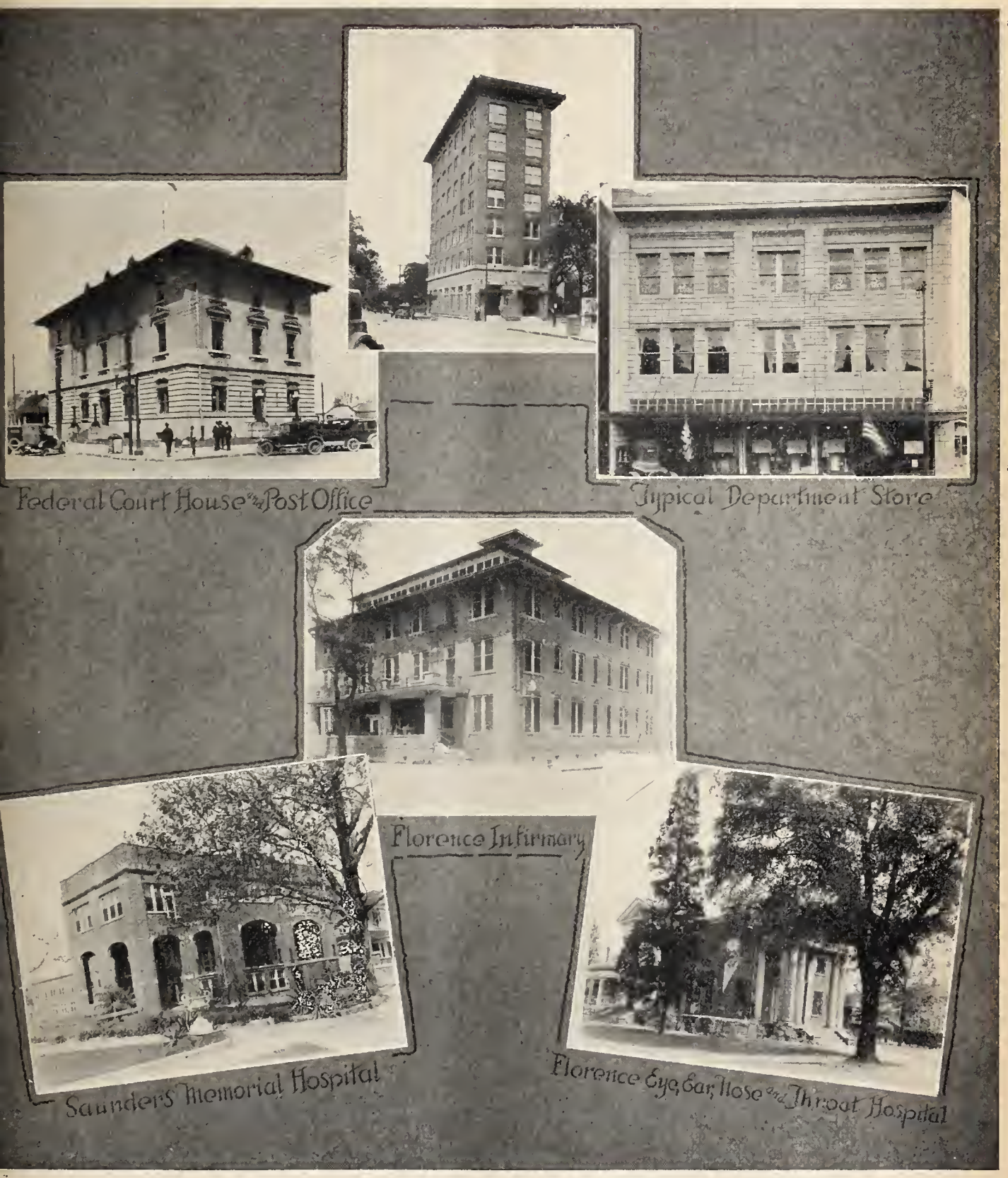
EARLY DIAGNOSIS OF TUBERCULOSIS CAMPAIGN

The systematic and cencerted attack which the doctors are making on the tuberculosis problem is bringing results. From present indications, tuberculosis will be put in the class with Typhoid Fever, Yellow Fever, and Small Pox, as a prehistoric disease. The work done in childhood tuberculosis spells an onward step in the march. The authorities recognize two distinct types of Tuberculosis,—Childhood Tuberculosis and Adult Tuberculosis. They are a distinct entity. The childhood type of tuberculosis is rarely found in adult life. They differ in their seats of infection. The prognosis in the childhood type of tuberculosis is always good. The death rate from tuberculosis is considered by many as being secondary to childhood tuberculosis.

Much work is being done with the tuberculin test in school children. A cross section of 45,000 school children in Massachusetts given this test showed 33% positive for the infection with 2% showing positive for the disease. In North Carolina, 25,000 showed approximately 25% had the infection with only 1½%, the disease.

A clearer understanding of the two terms disease and infection is desirable in thinking of the subject of tuberculosis. Infection means only a potential case, while disease means that the patient has marked symptoms of tuberculosis. With these ideas clearly fixed in our mind, we have a clearer-cut path to follow in our work of eliminating tuberculosis.

D. Lesesne Smith, M.D., State Chairman.


Federal Court House and Post Office
Typical Department Store
Florence Infirmary
Saunders Memorial Hospital
Florence Eye, Ear, Nose and Throat Hospital



OUR PRESIDENT, DR. CHARLES R. MAY, Bennettsville, S. C.

PRESIDENT'S PAGE

By C. R. May, M. D., President South Carolina Medical Association

OPEN LETTER TO MEMBERS OF THE ASSOCIATION

The Scientific Committee wishes to express their appreciation for the splendid co-operation that has been given so freely on every hand, to make the Florence Meeting a success. The Florence County Society, in particular, has shown an active interest in the program and have been actively at work in their efforts for this meeting.

We are delighted that Dr. William Guerry Morgan, President-elect of the American Medical Association, is to be with us. To Dr. E. A. Hines, our Secretary, goes the credit for this honor. His address should be heard by every member of the State Association who can possibly attend.

In selecting a subject for a Symposium, a number of men were consulted. Tuberculosis remains one of our problems. We have four splendid men to address us on this subject. Each of these men is especially qualified to deal with his subject. We feel very fortunate to have Dr. E. A. Parks of Baltimore and Dr. William Pinckney Herbert of Asheville on this Symposium.

Your committee feels that in recent years there has been too little time given over to the social side of our State Meetings. It is our plan this year to run the program through on schedule, and to so arrange the papers and addresses that there will be longer recesses for meals and for the various group reunions. The Florence Society is planning a party for us the evening of the 7th. The Pee Dee is famous for its hospitality and Florence has before shown us why.

There has been some doubt expressed from time to time as to Hotel facilities in Florence. Ample room for five hundred men has been provided. No one need fear any difficulty in getting accommodation. Good roads lead to Florence from every part of the State. We hope for a large and enthusiastic attendance.

Submitted by the Scientific Committee.

Hugh Smith, Chr., Greenville, S. C.
James C. McLeod, Florence, S. C.
Walter Mead, Florence, S. C.

I wish to add my hearty approval to the communication by the Scientific Committee. It has been my pleasure to travel over the State extensively during my term of office and to come in contact with many members of the medical profession. I have observed a growing interest in organized medicine in South Carolina and have been encouraged by the many favorable impressions about the prospects for a great success of the Florence meeting.

Advance information indicates a splendid growth of the constituent societies during the past year. I have observed an increased stimulation of scientific programs nearly all over the State. One of the chief enterprises of the Association is that of the official Journal. The Journal has prospered during the past year and has been particularly attractive not only from a scientific standpoint but to the highest type of advertisers as the best medium through which to reach our membership. Nothing appears to have been left undone by the profession of Florence and the Pee Dee to make our eighty-second annual session the largest, the most satisfying and the most enjoyable of any meeting hitherto held.

Charles R. May, President.

FLORENCE

Florence, the county seat of Florence County, is the geographical and commercial center of the Pee Dee section comprising nearly half a million people in the northeastern section of the state. From a modest and comparatively recent origin the city has grown quite rapidly although never at a phenomenal rate. At the present time it ranks as the fastest growing city in South Carolina. The 1920 census shows a population of approximately 11,000. Conservative estimate indicates that the present census will show an increase of at least 55 per cent for the last decade. The city is governed by the Commission Form of government, its officers being the Mayor, City Manager and four commissioners.



Typical Pee Dee Scene

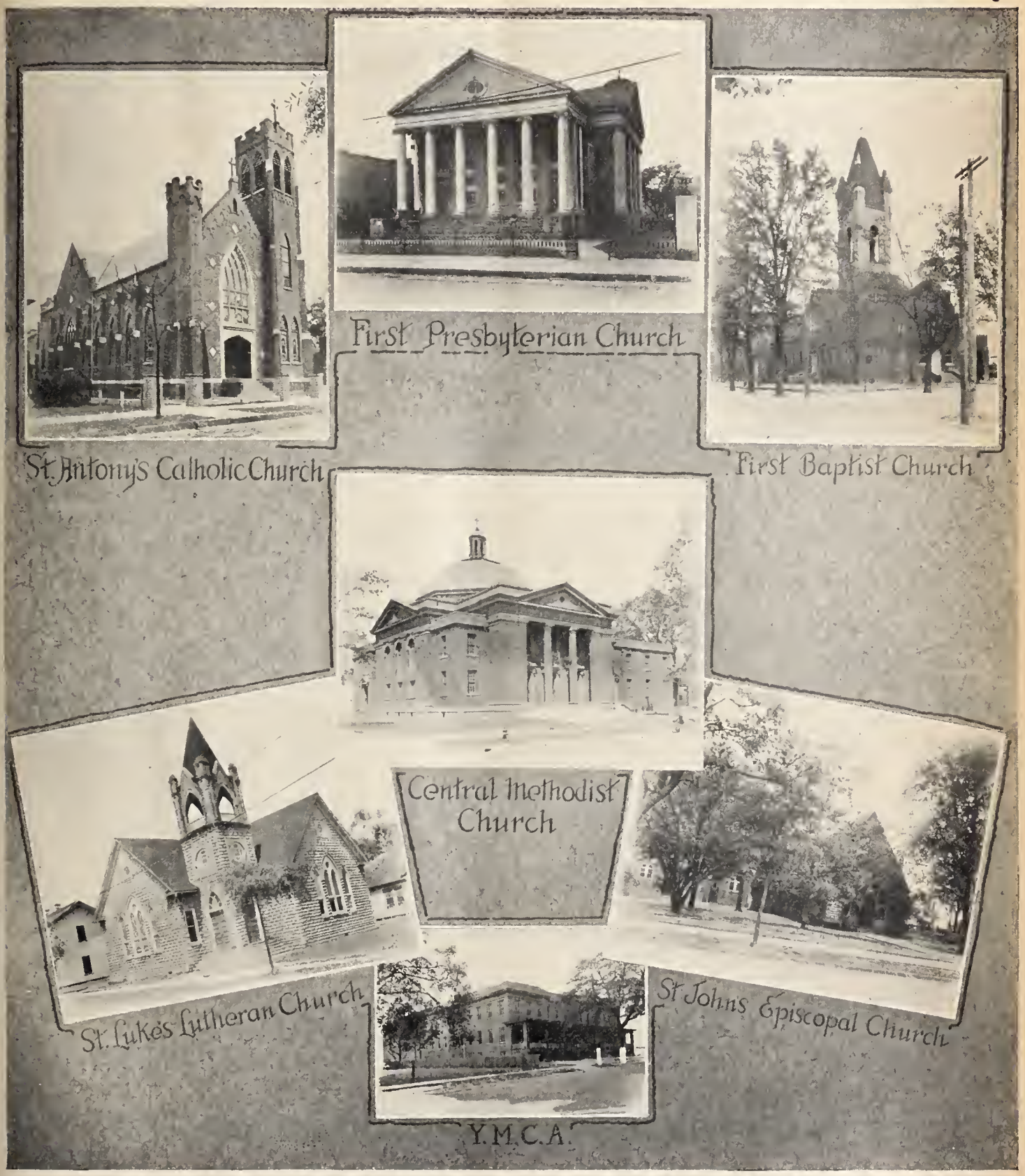
Transportation has always played an important role in the development of the city. Located at the junction of the First and Second Divisions of the main line of the Atlantic Coast Line railway, Florence has benefiitted by the enormous expansion of that road in recent years. Additional railway facilities are provided by the Seaboard Air Line so that Florence boasts of some fifty passenger and sixty freight trains entering and leaving the city daily. The increasing vogue of automobile travel between northern points and the Florida resorts has resulted in an unprecedented tourist population because of the strategic position of Florence on the new Atlantic Coastal Highway. Two other main state highways, both paved, interest at Florence and increase its importance as a bus terminal.

Public improvements have at all times kept pace with the most recent developments in city planning and city hygiene. The water supply is derived from artesian wells. A public park system has been in the process of development for a number of years, taking new impetus recently by the opening of a large municipal swimming pool. Tennis courts and playgrounds are being built at present. A school system which ranks second to none, a public library of unusual beauty and utility, a $250,000 Y. M. C. A. plant built in connection with the Atlantic Coast Line and a number of vigorous churches add to the attractiveness of the city as a residential site. Among the projected improvements is one very dear to the heart of all Florentines—a new hotel. Unfortunately this will not be a reality in time for the Convention but adequate facilities for the entertainment of the visiting physicians have been provided.

Two hospitals serve Florence and the surrounding Pee Dee section. The Saunders Memorial Hospital with some sixty-five beds was founded in 1921 and The McLeod Infirmary with one hundred thirty-five beds was founded in 1906. Both of these institutions are now identified with the Duke Foundation.

Florence welcomes the opportunity to greet the physicians of the state at their assembly in May. No effort will be spared to make their visit profitable both to them and to the community which they honor by their presence.

The Local Committee on Arrangement.
Dr. F. H. McLeod, General Chairman.


First Presbyterian Church
St. Antony's Catholic Church
First Baptist Church
Central Methodist Church
St. Luke's Lutheran Church
St. John's Episcopal Church
Y.M.C.A.

Program Eighty-Second Annual Meeting

The House of Delegates will meet at 8 P. M., Tuesday, May 6, in the auditorium of the Public Library.

HIGH SPOTS OF THE MEETING

The fact that this annual session convenes in the metropolis of the Pee Dee country assures its success. Florence is a city well known all over the country for its remarkable development as a medical center in addition to its commercial importance. It is not too much to say that no city in the South, any where near its size, has enjoyed a higher type of medical profession. To such an atmosphere the medical men of South Carolina look with enviable anticipations.

SOCIAL DIVERSION

At this particular meeting the officers and committees reached early a unanimous agreement that there should be a very definite attempt to provide proper relaxation from the busy grind of scientific sessions. It is believed that this decision will meet with favor throughout the State. In addition to the usual private dinings the President's reception and dance bids fair to be a social event of State wide importance. This function will be given on the evening of Wednesday, May 7, and will take up the entire evening. It will be staged at the Florence Country Club.

ALUMNI LUNCHEON OF THE COLLEGES

One of the most enjoyable get together events of recent years has been that of the Alumni luncheon. On Wednesday, May 7, all medical men are urged to be present. During the hour a short business session of the Alumni Association of the Medical College of the State of South Carolina will be held.

KIWANIS LUNCHEON

Preparations have been going on for some time by the Kiwanis Club to provide a luncheon on Thursday, May 8, at one-thirty in order that the medical men may meet the business men of the city of Florence and enjoy their always attractive program.

THURSDAY A BIG DAY

It is hoped that this year the tide will turn and that instead of the usual emphasis being placed largely on the first day of the scientific session that the spot light will be turned on Thursday, the second day. The officers have been working a year to this end. It is not too much to request that every member of the South Carolina Medical Association show his loyalty by planning to stay through to the end on the last day.

DISTINGUISHED GUESTS

On the program this year appears a brilliant coterie of scientific men whose attainments are known far and wide and whose contributions to our Association will mark an epoch in our history. Elsewhere on the President's Page will be noted the estimate placed on our good fortune in this regard by the Scientific Committee.

PUBLIC HEALTH ASSOCIATION

The South Carolina Public Health Association has grown in importance until now it is one of the most virile and stimulating organizations in the South. This Society will meet on the morning of Tuesday, May 6. There are now some one hundred members or more. The President, Dr. Leon Banov, is the very able Health Officer of Charleston County. Child welfare will be one of the chief topics of discussion this year.

X-RAY MEN TO MEET

An informal meeting of the X-Ray men will be held on the afternoon of May 6.



THE SAUNDERS MEMORIAL HOSPITAL

SYMPOSIUM ON TUBERCULOSIS

The chief interest of the South Carolina Medical Association at the Florence meeting will revolve around the subject of tuberculosis in all of its aspects. This will be impressed through a symposium and by an exhibit from the National Tuberculosis Association and the South Carolina Tuberculosis Association.

HOTELS

The Florence Hotel will be Headquarters. Other good hotels are the Colonial and the Central.

SCIENTIFIC PROGRAM

The Public Library, Corner Irby and Pine Streets. Wednesday, 9 A.M., May 7

Call to order by the President.

Invocation:—Dr. H. Tucker Graham, Pastor of the Presbyterian Church.

Address of Welcome and Announcements by Dr. W. R. Mead, President of the Florence County Medical Society.

Response:

PRESIDENT'S ADDRESS

By Dr. C. R. May, Bennettsville, S. C.

PAPERS

Reading time 15 minutes; discussion 5 minutes.

1.

A New Physical Sign in Pulmonary Embolism.
By Dr. J. R. Young, Anderson, S. C.
Discussion opened by Dr. Geo. R. Wilkinson, Greenville, S. C.

2.

Is The Agglutination Test For Undulant Fever Significant of the Disease.
By Dr. J. Heyward Gibbes, Columbia, S. C.
Discussion opened by Drs. E. A. Hines, Seneca, S. C. and H. M. Smith Columbia, S. C.



THE McLEOD INFIRMARY

3.

Cyanosis in Infants.
By Dr. William Weston, Jr., Columbia, S. C.
Discussion opened by Dr. Joseph I. Waring, Charleston, S. C.

4.

Adenoma of the Thyroid, Clinical Significance. Lantern Slides.
By Dr. William H. Prioleau, Charleston, S..C.
Discussion opened by Dr. J. H. Cannon, Charleston, S. C.

5.

Effects of Pregnancy on Post-operative Tetania-parathyroidpraeva.
By Dr. F. E. Zemp, Columbia, S. C.
Discussion opened by Drs. Le Grand Guerry, Columbia, S. C. and Carl West, Camden, S. C.

6.

The Treatment of Burns—The Final Word as End of the Chapter.
By Dr. G. P. Neel, Greenwood, S. C.
Discussion opened by Dr. W. P. Timmerman, Batesburg, S. C.

Special order, 12 noon.

ADDRESS

Chronic Gastritis

Dr. William Guerry Morgan, Washington, D.C.
President-Elect American Medical Association.
Recess: 1 P. M. to 3 P. M.

WEDNESDAY AFTERNOON

3 P. M. to 6 P. M.

7.

The Roentgen Examination of the Gastro Intestinal Tract. Moving Pictures.
By Dr. R. B. Taft, Charleston, S. C.
Discussion opened by Dr. P. D. Hay, Jr., Florence, S. C.

8.

Sodium Isoamylethyl Barbiturate as a General



The Florence Public Library where all Meetings Will be Held

Anesthetic. Moving Pictures Showing Entire Procedure.

By Dr. Barnie Baker, Charleston, S. C.
Discussion opened by Dr. Sam Orr Black, Spartanburg, S. C.

9.

Prostatic Resection. 100 Cases. Lantern Slides.

By Dr. T. M. Davis, Greenville, S. C.
Discussion opened by Dr. W. B. Lyles, Spartanburg, S. C.

10.

Vitamin B. Feeding of Infants, Lantern Slides.

By Dr. Joseph I. Waring, Charleston, S. C.
Discussion opened by Dr. Wythe M. Rhett, Charleston, S. C.

11.

Epidemic Meningitis with Especial Regard to Treatment.

By Dr. Julian P. Price, Florence, S. C.
Discussion opened by Dr. J. I. Waring, Charleston, S. C.

12.

Polycystic Kidneys.

By Dr. E. E. Herlong, Rock Hill, S. C.
Discussion opened by Dr. Norma P. Dunning, Winthrop College, Rock Hill, S. C.

13.

Coronary Thrombosis Simulating Surgical Abdominal Accidents.

By Dr. Douglas Jennings, Bennettsville, S. C.
Discussion opened by Drs. J. H. Cannon, Charleston, S. C. and W. R. Mead, Florence, S. C.

14.

Myocardial Failure.

By Dr. R. J. Coney, Cheraw, S. C.
Discussion opened by Dr. W. R. Mead, Florence, S. C.

15.

Infant Mortality in South Carolina.

By Dr. T. D. Dotterer, Columbia, S. C.
Discussion opened by Dr. Ben Wyman, Columbia, S. C.

THURSDAY, MAY 8, 9 A. M

16.

The Growth of the Ear and its Relations to Disease.

By Dr. J. F. Townsend, Charleston, S. C.
Discussion opened by Dr. W. J. Bristow, Columbia, S. C.

17.

Acute Intestinal Obstruction and Its Management.

By Dr. Julius H. Taylor, Columbia, S. C.
Discussion opened by Dr. F. E. Zemp, Columbia, S. C.

Symposium on Pulmonary Tuberculosis

18.

ADDRESS

Tuberculosis in Infants

Dr. E. A. Parks, Johns Hopkins Hospital, Baltimore, Maryland.

19.

The Diagnosis of Tuberculosis.

By Dr. George R. Wilkinson, Greenville, S. C.

20.

The Treatment of Tuberculosis.

By Dr. Ernest Cooper, State Park, S. C.

21.

Surgical Measures for Pulmonary Tuberculosis.

By Dr. W. Pinckney Herbert, Asheville, N. C.
Discussion opened by Drs. D. Lesesne Smith, Spartanburg, S. C. and James S. Fouche, Columbia, S. C.

22.

Broncho-sinusitic Diseases in Children.

By Dr. I. H. Grimball, Greenville, S. C.
Discussion opened by Dr. J. W. Jervey, Jr., Greenville, S. C.

23.

Diagnosis and Treatment of Sinus Infection.

By Dr. P. V. Mikell, Columbia, S. C.
Discussion opened by Dr. M. R. Mobley, Florence, S. C.

24.

Studies on Mineral Elements in Foods. Lantern Slides.

By Dr. Roe E. Remington, Charleston, S. C.
Discussion opened by Dr. William Weston, Columbia, S. C.

25.

General Practice in Modern Medicine.

By Dr. J. A. Norton, Conway, S. C.
Discussion opened by Dr. Robert Wilson, Charleston, S. C.

ORIGINAL ARTICLES

ALLERGY: ITS RELATION TO GENERAL MEDICINE

By Hal M. Davison, A.B., Phar.B., M.D., F.A.C.P.

and

Mason I. Lowance, B.S., M.D.,
Atlanta, Georgia

In this paper, the term *allergy* is used in its general sense, and refers to all clinical conditions of specific hypersensitiveness that are met with in the practice of medicine. Before entering upon the practical discussion of these conditions, however, it is wise to discuss certain terminology used in current literature and textbooks.

Specific sensitiveness is an immunological disease for the understanding of which two keys are necessary. The first is the idea of specific mechanism, and the second is the idea of the shock organ. These ideas are most easily explained and demonstrated by what has been termed anaphylatic shock in animals. If an animal—usually a guinea pig is used—be injected with a foreign protein, such as the white of an egg, after a time the animal becomes sensitized to this protein, so that the intravenous injection of this same protein will cause acute characteristic symptoms followed by death in a short time. The following experi-

*Read before the Anderson County Medical Society, Anderson, S. C., February 12, 1930.

ment shows the mechanism of this anaphylactic shock:

If some of the blood serum of the sensitized anaphylactic animal, obtained just prior to the final test of its sensitiveness, be injected intravenously into a normal animal of the same species, and if, the next day, this second animal be injected intravenously with a solution of the same protein, the animal dies with the characteristic symptoms of anaphylactic shock. This shows that the blood of the first animal carried substances (called anaphylactic antibodies) which are capable of making a normal animal immediately sensitive, and these antibodies constitute the so-caled mechanism of this form of specific sensitiveness.

The idea of the shock organ is explained as follows: It has been found that when the reaction of the anaphylactic antibodies with the protein that produces them takes place on an unstriped muscle in the guinea pig, a tetanic contraction in this tissue results. In the experiment on the living guinea pig, this tetanic contraction takes place in the muscles of the bronchioles of the lungs, and results in complete obstruction of respiration and death from asphyxiation. The shock organ in the guinea pig is, therefore, the lung, and the shock tissue is the unstriped muscle in it. So, in the case of specific sensitiveness of this type, the symptoms are produced by the effect of the interaction of antibody (specific antibodies) and antigen (the sensitizing protein) on certain tissues of a certain organ.

In the rabbit, the shock tissue is also unstriped muscle, and the organ is the lung, but the unstriped muscle affected is in the blood vessels of the lung, rather than in the bronchioles. If a sensitized rabbit be injected subcutaneously with the sensitizing protein, there is produced at times a localized spasm of the blood vessels of such severity that necrosis of the tissues results. This is called the phenomenon of Arthus. In a dog, the shock tissue is also the unstriped muscle in the walls of the blood vessels, but the shock organ is the liver. It is possible that we do not yet know all the tissues and organs that become affected by these reactions, even in animals.

In man, in the case of acute shock similar to that occurring in the guinea pig, death is also produced by spasm of the muscles of the bronchioles and the resultant asphyxiation. In anaphylaxis in lower animals, the mechanism is always the anaphylactic antibody which reacts with the antigen to cause shock. In the allergies in the human, among which are included asthma, hayfever, urticaria, angio-neurotic edema, eczema, food and drug idiosyncrasies, serum sickness, specific dermatoses, due to such agents as poison ivy and sumac, and tuberculin sensitiveness, anaphylactic antibodies seem not to be responsible for the reaction, since their presence cannot be demonstrated except in serum disease.

Other experiments have shown that antibodies may exist in the human blood without clinical hypersensitiveness being demonstrated. Humans, however, are capable of producing another kind of antibody called skin-sensitizing reagin, which has not as yet been demonstrated in the blood of animals. These reagins can be demonstrated in the blood of humans suffering from asthma and hayfever due to a known antigenic excitant, and they are recognized as the mechanism of a well-defined group of allergic diseases classified under the term *atopy*. Anaphylactic antibodies are capable of sensitizing unstriped muscle in animals, but not the human skin, and they readily neutralize the antigen with which they are related. The atopic reagins are capable of sensitizing human skin, but not unstriped muscle, and they are usually incapable of neutralizing the antigen with which they are related. If the blood serum of a patient suffering from some form of atopy be injected into the skin of another person, and if, next day, that person's skin be injected in the same spot with the antigen which precipitates ther eaction in the first individual, there occurs a reaction in the skin at the injected spot. In the allergies other than those classified under atopy, no specific mechanism has been demonstrated.

An anaphylactic animal can be desensitized, that is, the antibodies can be neutralized by suitable administration of the antigen. In atopic states, this cannot be done. Also, there is a special hereditary influence in atopic diseases, and this is not found in other forms of allergy. These differences are most readily

demonstrated in the reactions to horse serum occurring in the two types of patients, the one type giving the relatively non-serious reaction called serum sickness, and the other type having an inherited sensitization usually associated with asthma, hayfever or other atopic conditions, in which state the reaction to the administration of horse serum is more serious, and may result in death.

The above facts have given rise to the following classification of these states:

1. Anaphylaxis (in lower animals only)	a. Mechanism — anaphylactic antibodies. b. Desensitization — easily accomplished. c. Hereditary influence-slight, if any.
2. Atopy (in man only; incidence less than 10 per cent.	a. Mechanism—topic reagins. b. Desensitization—none in atopic persons. c. Hereditary influence — controlling.
3. Tuberculin sensitiveness (dependent upon the bacterial infection; occurs in man and animals	a. Mechanism—not known; not anaphylactic antibodies or reagins. b. Desensitization—increased tolerance which is specific; probably desensitization. c. Hereditary influence — none known.
4. Serum disease (occurs in 90 per cent of white people after injection)	a. Mechanism—not known; not anaphylactic antibodies, or reagins. b. Desensitization—none. c. Hereditary influence—none.

(Coca, Arthur L.: **The Grounds for an Etiological Classification of the Phenomena of Specific Sensitiveness.** Jour. of Allergy, Vol. I. No. 1. 74. November 1929.)

In the present discussion, we will omit further reference to the above classification, and will discuss from the standpoint of general medicine the diseases mentioned in the beginning of this paper as being allergic. We intend to show the necessity for the branch of medicine to be taught in all medical schools, and the necessity for every doctor, no matter what particular specialty he may be engaged in, to be well informed of the general aspects of allergy. Different conditions affecting all branches of medicine will be briefly discussed.

In addition to the necessary examinations, beginning with such history, physical examination, laboratory and x-ray work as may be indicated, the diagnosis of the causes of allergic conditions is made by the use of skin tests. These tests and the materials used have been described and explained fully in textbooks and in many papers. A physician using these tests should first have a short course of instruction in some clinic in order to learn the technique of testing and the interpretation of the results, and should have a complete set of the extracts, or allergens, as they are called. It is not absolutely necessary, but is both desirable and convenient to have a laboratory equipped to make the liquid extracts or allergens. The required apparatus is relatively inexpensive, and the methods of making these extracts are easily learned. Very often it is necessary to make extract of some special substance or of some patient's house dust. Also, combinations of various allergens can be made by the physician for any individual case.

One of the allergic diseases most frequently encountered is allergic coryza. This disease may be of the seasonal type called hayfever, or of the non-seasonal type formerly called vasomotor rhinits. Vernal catarrh, also, probably belongs in this classification, but this entity is not so well understood as are the other two. Seasonal hayfever usually comes in the spring, summer, or fall, but may occur throughout the entire pollinating season. In our locality, there is pollen in the air from about January 18 or 20 until some time in November. In cases of hayfever or seasonal allergic coryza, diagnoses can be made in about 90 per cent of the cases, and the patient can, as a rule, be given marked relief by the injection of the extracts of the pollens to which he is sensitive.

Non-seasonal allergic coryza occurs throughout the year, but may be misleading, in that it also varies at times with the seasons. Any case of frequently repeated colds or sneezing should be considered possibly allergic, and should be tested for sensitization. The most common causes of this condition have been found to be orris root, rice powder, wheat flour, feathers, dog, horse and cat hair, and house dust. Occasionally foods, and even drugs, may cause allergic coryza.

In the treatment of non-seasonal allergic coryza, the patient is removed from contact with the offending substance, if possible. If this cannot be done, treatment is accomplished

by giving extracts of the substances causing the symptoms.

In every case of allergic coryza, the nasal passages and the sinuses should be carefully examined, and if there is any doubt as to their being diseased, they should be x-rayed. Symptoms in allergic coryza are always increased by sinus disease, and, at times, chronic sinus disease will produce a typical picture of allergic coryza| There are usually fewer eye symptoms and less itching in the sinus disease, but there is no clear-cut difference in the symptoms.

Certain cases of ophthalmia and keratitis have been suspected of being caused by sensitization. We know of one family in which nine cases of gluacoma have occurred, and in which there is a marked family history of asthma and hayfever. Unfortunately, we have not been able to test out these patients, but we believe that in any case where there is a familial history of any known allergic disease, allergy should be suspected as being the cause of the other familial diseases. Further observations on the eye, ear, nose, and throat diseases are desirable.

Skin manifestations believed to be allergic include erythema, urticaria, eczema, angio-neurotic edema, mixed lesions of the above, drug eruptions, poison oak, and similar dermatoses. The diagnoses of these skin conditions by the skin tests are not nearly so satisfactory as in the other allergic conditions. We cannot yet tell accurately what percentage of these cases can be diagnosed by the skin reaction. In some cases, however, the reactions are definite and conclusive, and the results of treatment are good. These conditions are most often caused by foods, but may also be due to animal dander, bacterial proteins, pollens or other antigenic substances. The treatment of poison oak and poison ivy by an extract of these plants is satisfactory, both as a preventive and as a cure.

In the field of urology, spasm in the genito-urinary tract and burning in the bladder with painful urination have been proven to be due to specific sensitization in some cases. Duke has found quite a few of these cases in which skin reactions were obtained and in which the symptoms were entirely relieved by leaving out of the diet the foods giving these reactions. In these cases, symptoms were produced at will by including the offending foods in the diet. We have just finished the examination of a patient who has been suffering for ten years with the above-mentioned symptoms in the bladder, has undergone two operations and many cystoscopic examinations and treatments by different physicians. No local cause for her symptoms has ever been found. Despite the fact that she complained of hayfever caused by contact with flour, no one had ever tested her for sensitization. Skin reactions showed marked sensitization to wheat and smaller reactions to several other cereals. This case will be reported in detail later. No definite outline can be laid down for suspecting sensitization in these cases, but the absence of local causes for the symptoms, the lack of results from local treatment, and the presence of other possibly allergic phenomena should lead one to suspect that these symptoms may also be allergic. In this type of case, when sensitization to food is found and proven, the only treatment necessary is the absolute exclusion of the offending foods from the diet.

In gastro-enterology the conditions that have been found at times to be allergic are: Cardiospasm, pylorospasm, spastic colitis, mucous colitis, canker sores, and nausea and vomiting. These conditions are rarely allergic, but the possibility of their being so should never be overlooked under the circumstances already described in the paragraph on the genito-urinary tract. It has long been suspected that ulcer of the stomach might be allergic; the reaction causing the ulcer would be, in such cases, a spasm of the blood vessels, as in the case of the phenomenon of Arthus in the rabbit. Ulcers of the stomach have been produced experimentally in sensitized animals. The diagnosis of allergy in the above mentioned diseases is also made by the skin tests, and the treatment is to remove the offending food from the diet.

Among diseases of the lungs, asthma is the most important of the allergic manifestations. Skin tests in cases of asthma will give diagnostic reactions in over 70 per cent of the cases. Every case of asthma should be tested with all the allergens, since this disease can be caused by any known allergen, and very probably by many substances as yet unknown. It is also true that multiple sensitization exists in almost every case of asthma.

In the treatment of asthma, contact with all offending substances should be absolutely avoided at all costs. It is practically impossible to avoid contact with the powdered substances called inhalants that are commonly present in the air. In cases sensitive to such substances, treatment is given by subcutaneous injection of extracts of the offending agent. It is not unusual for emphysema, bronchiectasis, chronic bronchitis, and pulmonary tuberculosis to occur with asthma, and every asthmatic patient should have an x-ray examination of the lungs. The nose and sinuses should also be examined carefully. We have never seen definite relief in a case of asthma complicated by the presence of sinus disease and nasal polypi, until these conditions were properly treated.

In addition to treating practically all other allergic phenomena, pediatricians are especially interested in treating ordinary croup. Bivings, of Atlanta, has proven several cases of croup to be definitely allergic, and has demonstrated sensitization to foods. Another fact that shows that croup may be allergic is that the spasm is instantly relieved by the administration of ephedrin or adrenalin.

Migraine, epilepsy, and Meniere's disease are the entities in the neurological field most apt to be allergic. There are familial histories in a large percentage of these cases, more in migraine than in the other two, and positive skin sensitiveness can be demonstrated in some of them.

Drug sensitizations are of interest to all physicians. There is no doubt that we neither recognize nor know all the forms of drug hypersensitiveness. The most common reactions occuring in this form of hypersensitiveness are sneezing, asthma, urticaria, eczema, angioneurotic edema, other types of skin eruptions, nausea and vomiting, gastro-intestinal pain, delirium, and the reversal of the usual reaction to be expected from the drug. Aspirin, quinine, delphinium, ipecac, belladonna, phenolphthalein, the arsphenamine group, the morphine group, and the veronal group are the drugs most often found to cause such reactions.

The reactions caused by the administration of horse serum vary from acute spasm of the muscles of the bronchioles, followed by death, to the usual symptoms of serum sickness. Serum sickness may manifest itself within a short time after the administration of the serum, or may come as late as four weeks afterward, but the usual appearance is in the second week. We have seen the following reactions: Asthma, allergic coryza, erythema, urticaria, angio-neurotic edema, chills, fever, arthritis, swollen lymph glands, nausea and vomiting, abdominal cramps and delirium. The temporomandibular joint is often involved in these cases of arthritis, and tetanus may be suspected because of this. Horse serum should never be administered to any patient unless adrenalin is immediately available. Before intravenous administration, the skin should always be tested for sensitization to horse serum, and if sensitization is present, the patient should be hyposensitized before the serum is administered in therapeutic doses.

Hyposensitization is perhaps the most safely accomplished by beginning the subcutaneous injection with a small quantity of the serum in dilution, say 1/40 cc., and doubling this dose every twenty or thirty minutes, until the patient has received subcutaneously up to 10 cc. of serum; then this process is repeated, giving the serum intravenously. If there has been no reaction when the dose of 10 cc. intravenously is reached, it is usually safe to proceed with larger quantities. In some cases, it is possible that hyposensitization cannot be successfully accomplished, and in these cases large doses of serum should not be given intravenously.

Certain forms of arthritis are suspected of being allergic phenomena rather than manifestations of local infection in the joint, bacterial proteins being the offending agents.

Certain cases of Henoch's purpura have been shown to be allergic, the reaction being relieved by leaving the offending food out of the diet, and produced at will by adding to the diet the article causing the reaction. Positive skin tests were demonstrated.

Among the unusual causes of allergic phenomena may be mentioned the bits of various insects, such as bees, wasps, and bedbugs, the emanations from sandflies, human dandruff, intestinal parasites, different sawdusts, boxwood polish, parasitic growths on grains, smoke, and the oil of thyme.

Duke considers heat, cold and light to be the

actual cause of allergic phenomena in some instances. He considers that he has proven this to be true in that he can produce at will in certain patients such lesions as urticaria by exposing them to light, heat, or cold. It is definitely known that physical agents, especially heat and cold, may precipitate attacks of asthma, allergic coryza, urticaria, and angio-neurotic edema. In these cases in which definite sensitization to other substances has been proven, heat and cold have heretofore been considered "trigger" elements as described below.

In addition to the above-mentioned phenomena, we want to mention the following that we think might be studied from the standpoint of allergy: Spasm of the vessels in such conditions as cerebro-vascular crises and Raynaud's disease, convulsions, especialy in infants and children. The condition of essential hypertension might conceivably be allergic.

In connection with the actual causes of the allergic phenomena, we believe that there are at times precipitating or "trigger" causes of actual attacks. This is perhaps best seen in cases of asthma. Patients may come in daily contact with substances to which they have been proven sensitive, and yet have no actual attack of asthma until some other element is also present. This so-called "trigger" element in many cases has been one of the following: Colds or other infections, constipation, menstruation, emotional or neurotic attacks, undue exercise, laughing, and contact with some mechanical irritant. There are undoubtedly others that we do not know. The posible relation of allergy to the colloidal chemistry of the body, to the endocrines, and to the non-specific protein reaction is not known.

Summary:

In the above paper there has been given a general discussion of the mechanism of specific sensitiveness, the classification of atopic and allergic diseases, and a brief resume of the more important allergic phenomena arranged as they occur in the different branches of medicine.

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THE IMPORTANCE OF THE FUNDUS OCULI IN THE CONSIDERATION OF GENERAL VASCULAR DISEASE*

By J. W. Jervey, M.D., Greenville, S. C.

The compliment conveyed in the invitation to address your society tonight is hereby acknowledeged with thanks and deep appreciation. I am asked to discuss for you and with you the practical aspects of the relationship of the eyegrounds to certain diseased conditions affecting the circulatory system. The subject is a large one, and one on which much has been written and spoken in the past few years. It will be wise, therefore, to limit the range of our discussion, and so I shall speak chiefly in a general way of the fundus changes observed in connection with hypertension, arteriosclerosis, nephritis, and diabetes.

Arnold Knapp opens the preface of his excellent volume on Medical Ophthalmology in Pyle's System of Ophthalmic Practice with the quotation '"It seems to me that the best and most hopeful feature of ophthalmology is that it has relations, closer or more remote, with every branch of medicine and surgery; indeed, with almost every branch of science'." And then he adds: "These relations are today closer than ever and are important not only for the eye-specialists but even for the general practitioner."

I do not come to you with the report of any original findings. All I can do is to bring to your immediate attention a few outstanding facts and theories which may be of interest and importance to you in this connection.

It is pretty generally accepted, I believe, that every internist should be in some degree familiar with the use of the ophthalmoscope. I have reason to know that this is the case with your distinguished president, who was trained in the school in which the great Osler insisted that inspection of the eyeground should be a part of every general examination. On a number of occasions it has been my privilege to see serious pathological intraocular conditions which had been first discovered by his ophthalmoscope. On the other hand, a careful and intelligent use of this instrument may at times afford a clue that will lead to a correct general diagnosis, and sometimes too may be of valuable aid in the projection of a prognosis.

A few years ago a middle-aged lady from a neighboring city consulted me about her eyes. I had made a careful examination and record of her eyes a year or two previously. From my findings (including marked refractive as well as retinal changes—a very suspicious combination). I strongly suspected the presence of diabetes. I wrote a note to her family physician suggesting this. He replied that repeated urinalyses were negative and that she was not diabetic. My request for a consultation with an internist was readily acceded to. He, too, reported to me that the woman had no diabetes. Once more, and for the last time I returned the patient to my internist friend begging that he do a little blood chemistry. Then, later, I was rewarded with a charming note, advising me that the patient did have a definite diabetes, and assuring me that it certainly was a pleasure to be associated in a case with somebody who occasionally knew what he was talking about! Under appropriate treatment the patient entirely recovered her health and the eyegrounds and refraction returned to their *status quo ante.*

Some years ago I was consulted by a wealthy middleaged banker on account of his failing vision. The ophthalmoscope revealed extensive degenerative retinal disease. General examination showed the presence of an old well-advanced chronic nephritis. I suddenly remembered that a few years before this man had boasted to me that he did not believe in life insurance; that he could invest his money better than any insurance company could invest it for him. Now it was clear. He couldn't get life insurance! And he neglected his physicial condition (a great big strapping fellow, he was). But if he had been informed of possible blindness he might have pursued another course, and have lived longer. He died within the year. The usual expectancy in such cases is from one to three years. I mention these little episodes merely to illustrate the frequent practical value of a knowledge of intraocular changes.

For quite a long time after the ophthalmoscope had proved its usefulness and importance, it was thought likely that there could be shown a distinct and characteristic fundus picture for

*Read by invitation before the Richland County Medical Society, Columbia, S. C., March 10, 1930.

each of the diseases we are discussing, and so often clinch a diagnosis. Even today this feeling, or belief, is rather widespread. I am sorry if to some of you I shall seem to be throwing a monkey wrench into the machinery of your thoughts. It is not without a tinge of regret, however, that I am compelled to subscribe to present day observations and teachings that there is no known ocular fundus picture which is characteristic of any known general disease. The eyegrounds often, of course, present changes which are suggestive of the cause of their pathology; but whether it be hypertension, arteriosclerosis, Bright's disease or diabetes, it is coming to be accepted that it is not the toxin of the disease, but the secondary involvement of the vascular elements which produce the intraocular variants.

How widespread has been the prevailing contrary view in the profession at large is brought to me by an incident of only a few years ago. I was summoned in consultation by a well known practitioner in a case which he suspected, but could not be sure, was a chronic nephritis. When I arrived on the scene he informed me of his belief, and stated that he had called me because if this really was a chronic nephritis it would necessarily show characteristic changes in the eyegrounds, and these changes he desired me to find. He was surprised when I told him that ocular fundus changes were observed only in from 15 to 25 percent (at the outside) of chronic nephritides, and that even when demonstrable, while they might often be suggestive, they could hardly ever be said to be characteristic. Much as you might be inclined to doubt, I can assure you there are many men in practice today who hold the same nebulouc preconceived idea that he did.

The question which thinkers and observers in this field are trying to answer today is not what fundus phenomena can be shown to be characteristic of a specific general disease (for there are none); but rather what fundus changes may be found in the eye coincident with certain general diseases.

The modern concensus of opinion appears to be that in all of these diseases the eyeground lesions are not due to the specific toxins in any case, but directly to the morbid vascular condition accompanying it, and these vascular changes, usually arteriosclerosis, are in no sense peculiar to or characteristic of any one of these diseases.

For example, the retinitis occurring in a case of nephritis, even the stellate form of exudates about the macula, is not properly, though generally, called an "albuminuric retinitis.' The nephritis, or albuminuria, is not directly causative of the retinitis. If it were we should naturally expect to find this retinitis in all cases of albuminuria. But we do not so find, and we can now be quite sure that the eyeground changes are due to the physical condition of the vessels occurring in some cases of nephritis. The same is true of diabetes and hypertension and their relation to ocular fundus pathology.

Even the one time supposedly typical retinitides seen in some cases of diabetes and nephritis have been shown to occur one for the other, and either one might be seen in hypertension or arteriosclerosis or other general disease, and they have been often observed when no diabetes or nephritis or other general disease could be shown to exist.

Yet it is only fair to say that Sir John Herbert Parsons, in the last edition of his "Diseases of the Eye" says: "Albuminuric neuroretinitis, in its most typical form, presents an ophthalmoscopic picture which is almost pathognomonic, being simulated only in some cases of intracarnial tumour." But we may reflect that this "most typical form" is not so often encountered, and his words a little farther on would seem to be of much weightier import, namely: "The urine should be examined in every case of retinitis." And a little later he admits that this "typical form"—"may occur without any signs of definite nephritis, and somewhat similar appearances are met with in glycosuria and leucaemia. Rarely a star at the macula, with or without slight papillitis, has been met with in young persons with anemia or chlorosis, or without discoverable cause." So there we are!

It is true, however, that simple hypertension and general arteriosclerosis can often be strongly suspected early in the disease (when other signs may escape the examiner) when the ophthalmoscope reveals certain changes which I shall refer to; and it is well to remember that these conditions are by no means confined to

middle and old age, but are frequently encountered even in young adult life. And it is also true that not infrequently a chronic nephritis is first discovered by the ophthalmoscope.

In the Practical Medicine Series (1928) Eye, page 138, we find the following: "Probably most of our ideas regarding the significance of retinal changes are based upon a study of the fully established, typical-appearing fundus picture in the advanced arteriosclerotic or nephritic. Such cases, usually hospitalized, include hypertension with a breakdown in cardiac or renal function; and those with little or no rise in tension, the decrescent arteriosclerotic. With a fairly accurate notion of the prognosis of each case dependent on other data, the presence or absence of retinal change does not entail such large measure of importance—the renal case without retinitis may offer the same prognosis as the one with retinitis. Of more importance, perhaps, is the pre-hospital group, seen by ophthalmologist and internist alike, where often an isolated sign, such as compression of a retinal vein by an artery, serves to focus his attention on the cardiovascular system."

But it is well to remember, and it is pretty generally accepted as true, that an advanced chronic nephritis showing gross degenerative changes in the ocular fundus, will in all likelihood succumb to the disease within two or three years from the onset of the failing vision. One must not forget, however, that this prognostic rule is not to be applied to cases of acute nephritis or albuminuria, such for instance as the albuminuria of pregnancy, for in these cases recovery is most likely to ensue.

And it is also well to remember that, generally speaking, increase in retinal sclerosis is apt to be proportionate to the severity of systolic pressure, except of course where a failing heart shows a lowered tension.

Quoting again: "What of the dilemma, then, in which the physician is placed by finding slight or moderate retinal sclerosis, where blood pressure for the age group is normal, where there is neither subjective nor another objective sign of cardiovascular disease? For may not the cerebral vessels be diseased, and is it not true that the state of the retinal vessels corresponds to that of the cerebral? The fact remains nothing definite can be said of the state of the cerebral vessels when those of the retina are but moderately sclerosed. The likeness, if any exists, holds only for advanced states of disease. That such an isolated finding is of value cannot be denied, in so far as it focuses attention on a potential weakness but its immediate importance is not to be overemphasized."

deSchweinitz, for instance, has pointed out that certain early signs of vascular hypertension can often be seen in the eyegrounds, namely a corkscrew like appearance of small terminal vessels usually about the macula; a slight humping of a vein as it passes over a tense artery and is thus at this point lifted out of the plane of its normal course; and moderate but distinct blurring of the optic disc.

Other fundus changes that occur in hypertension and arteriosclerosis, especially as they advance, are hemorrhages of various shapes, sizes and numbers; patches of so-called "exudates" of whitish or yellowish appearance, of every conceivable shape and size and number with edges either clear cut or ill-defined and fading; light streaks along the sides of the vessels (perivasculitis); broadened light streaks along the middle of the vessel; a definite picture of pressure as the sclerotic artery crosses the softer vein, often causing a slight venous bulging on the distal side of the point of pressure; thickening of the intima of the arteries (endovasculitis) reducing the blood stream to a thin thread between two white walls; and even entire obliteration of the lumen, leaving the vessels lying like a white band in the retina; and finally various stages of optic neuritis.

The "exudates" spoken of are really not exudates at all, but transudates for the most part, perhaps fibrinous, becoming hyaline, or composed of lipoid or colloid material or bunches of leucocytes, or cholesterin crystals following absorption of retinal hemorrhages. At times tissue damage following hemorrhage may result in scars giving much this "exudate" appearance. I mention this since so many individuals do not seem to know exactly what they mean when they speak of retinal exudates. It is not without interest, in this connection to refer to the dictum of John E. Weeks, who said in substance: "There is no such thing as exudative

disease in the absence of vascular pathology." I think we can all subscribe to that.

The fundus picture showing all or part of these lesions, in infinite variety, simplicity and complexity may be seen also in many cases of nephritis and diabetes. And they may also be seen in great variety when it is not possible to demonstrate the presence of any general disease whatever, which brings us back to the thesis stated in the earlier part of this paper:

"There is no known ocular fundus picture which is characteristic of any known general disease."

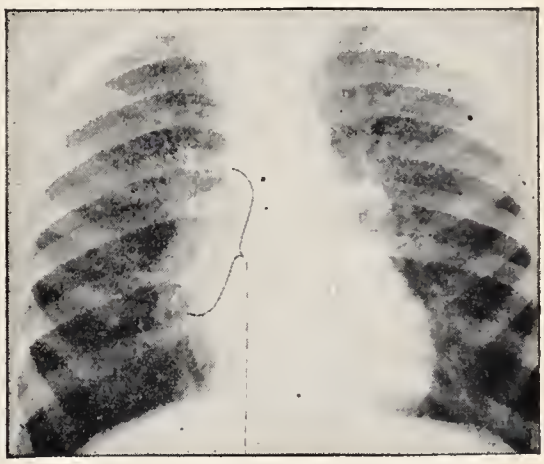
But let us at least have the grace to sing a Te Deum Laudamus for the indisputable fact that the fundus oculi often points suggestively to a general diagnosis, and is likewise not infrequently a valuable aid in the formation of a prognosis.

TUBERCULOSIS ABSTRACTS

A Review for Physicians

Current medical literature reflects a widespread interest in childhood tuberculosis. Practitioners are realizing the importance of recognizing the disease in its early stages while it is yet possible to curb its insidious extension. "Tuberculosis in Children" by J. A. Myers, which has just issued from the press, gives a clear and homogeneous picture of this complex subject. It describes both the childhood type and the adult type of pulmonary tuberculosis as well as non-pulmonary tuberculosis in children. Long experience as chief of staff of Lymanhurst, in Minneapolis, America's first school of its kind for tuberculous children, gives perspective to Dr. Myers' observations and probably accounts also for those rare sparks of human sympathy which prevade the book, from which the following briefs have been abstracted.

That pulmonary tuberculosis as commonly seen in the adult is preceded by a developmental stage, vaguely designated as the "pre-tuberculous stage," which is more or less concealed or latent, has long been appreciated. Confusion has arisen out of such synonymous terms as infantile, juvenile, tracheobronchial, hilum, primary complex, Gohn's tubercle, employed by various writers to designate this stage. This confusion is largely dissipated by the definition adopted by the American Sanatorium Association in 1929, and to which the author subscribes; namely, "Childhood type of tuberculosis is the term used to describe the diffuse and focal lesions in the lung and adjacent tracheobronchial nodes that result from a first infection of the pulmonary tissue with the tubercle bacillus." Roughly, the distinguishing feature between the childhood type and the adult type of pulmonary tuberculosis is that the former



Tuberculous lesions of the childhood type. The mother of this child died a few months after the picture was taken.

represents the reactions of the bacillus on virgin or nonsensitized soil and is characterized by cell proliferation, while the latter is in the nature of a reinfection on sensitized soil and tends toward destruction of tissue.

Wide Variety of Lesions

How the body will withstand the initial infection is determined largely by the dosage of the bacillus and, to some extent, by anatomical differences dependent upon the age of the individual. The resulting pathology may vary widely from a rapidly progressive, disseminated, miliary involvement to a single, small, inconspicuous nodule. A rather typical or common form seen in children of the school age is that in which the initial lesion may appear anywhere in the lung but most commonly at the periphery, followed quickly by an involvement of the lymph nodes draining the infected area. Coincident with this first encounter of the body cells with the tubercle bacillus, the entire body becomes sensitized or allergic. The primary lesion may be so small as to escape detection by

the X-ray. The lymph nodes which have become enlarged, later caseous, and then calcified, cast definite shadows on the X-ray film.

Symptoms and Physical Signs

The diagnosis of childhood type of tuberculosis is not complete until the extent of the involvement and its progress have been determined. A history of exposure to tuberculosis from father or mother or from a close associate is of great significance. There are no characteristic symptoms; the child may or may not be underweight, he may show signs of fatigue and occasionally exhibit a rise of temperature of a degree or two. But even these vague symptoms may be absent. Similarly, physical signs are either absent or untrustworthy, inasmuch as the pathology in early cases is not sufficient to give rise to characteristic physical signs.

Two procedures, however, enable the practitioner to make a diagnosis: the tuberculin test and the X-ray. The tuberculin test determines infection. Myers recommends the intracutaneous technique not only because it is more certain but also because the variations in the reaction give some clue as to the extent and activity of a tuberculous process. This test should never be omitted, even in older children. The X-ray pictures the lesions, particularly those that are calcified. No examination for suspected tuberculosis among infants and children is complete without this aid, though a negative X-ray does not necessarily rule out tuberculosis; miliary disease may progress to a fatal outcome while yet the X-ray picture is clear; and focal lesions in the parenchyma and the hilum may be so small as to cast no shadow.

Close Contact the Imiportant Factor

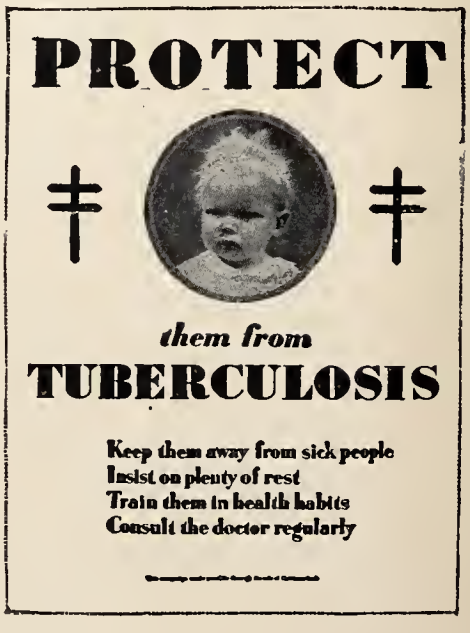
The author discusses at length the etiological factors, with special reference to the communicability of the disease. The idea that tuberculosis is inherited is, of course, no longer tenable, but the observation of the older writers that "tuberculosis runs in families" is confirmed and explained on the basis of early infection through close contact with adult members of the family. Drawing on his rich experience, Dr. Myers cites numerous cases to illustrate the need of ferreting out the source of infection; for example:

"A student nurse was diagnosed tuberculous in September, 1927, and placed in an institution under treatment. This fall, she is resuming her training. An older sister was examined, although she did not have the adult form of tuberculosis at that time, there was unmistakable evidence of the latent childhood type in her chest. What was the source of exposure? The older sister was inclined to believe that she might have developed the disease through intimate contact with her sister. However, this did not seem probable since her disease appeared far older than that of her sister. According to the history, there had never been a case of tuberculosis in their family. In August, 1929, we were asked to see the mother, who had been brought to a hospital. She had frank pulmonary tuberculosis with bacilli in the sputum."

The Teen Age

During the teen age, tuberculous lesions of the adult type begin to appear with greater frequency. They may be seen in all stages of development and retrogression. Evidences of tuberculosis in children, however slight, must never be ignored, for though immediate danger may not seem to be imminent, a serious outcome is likely to follow unless prompt treatment is instituted. In general, the treatment consists in preventing further exposure of the child to tubercle bacilli, together with common sense hygienic care, as epitomized in the poster illustrated.

During April, 1930, tuberculosis associations throughout the country will call to the attention of the public the importance of discovering tuberculosis in its latent stage in children. More than five million pamphlets will be distributed;



two hundred thousand posters like that illustrated and six thousand billboard posters will be displayed. Newspaper articles, lectures, motion pictures, and many other publicity devices will also be called into play. For phyisicians who desire it, there will be made available a 32-page brochure on "The Childhood Type of Tuberculosis" by Chadwick and McPhedran. It treats of the diagnosis, prognosis and treatment of the condition, describes the technique of the tuberculin test and interprets the reactions by means of color plates. There are six excellent X-ray pictures reproduced by the "aquatone" process, with interpretations. Ask your tuberculosis association or the National Tuberculosis Association for a copy.

CHARLES BLUM GEIGER. AN APPRECIATION

By W. Scott Harvin, M.D., Manning, S. C.

Charles Blum Geiger was born in Lexington County, South Carolina, June 19th, 1867 and reared in the St. Matthews section of Orangeburg County. He was educated in the common schools of that section and later entered the Medical College of South Carolina, from which he graduated in 1892. He then served an internship in St. Francis-Xavier hospital of Charleston, S. C. From there he located in the Town of Manning, S. C. and practiced his profession for nearly forty years.

He was a member of the American Medical Association, South Carolina Medical Society and Clarendon County Medical Society and veteran of the World War, having served with the rank of first Lieutenant in the Medical Corps at Camp Sevier, Greenville, S. C. from August 16th, 1917 to November 30, 1918. He was a Royal Arch Mason, Woodmen of the World, and Knight of Pythias. On June 20, 1907 he married Miss Nettie Weinberg of Manning, S. C.

In the loss of Dr. Geiger Manning and Clarendon County, as well as the State of South Carolina, lost one of its most valuable and beloved citizens and physicians. Dr. Geiger was a man of sterling qualities and an unusual character. Every one who knew him had profound confidence in him and he was a physician and man who did not know the word "no." He is missed in this community for his good qualities and his unusual kindnesses and charitable inclinations to the poorer class of people. Dr. Geiger did as much, or more, charity work than any other man in this community. He not only prescribed for the poor without compensation but often furnished them with medicine and then had food sent to them.

Dr. Geiger departed this life November 28th, 1929 and it will be next to impossible to fill his place.

SOME OTHER OBSERVATIONS OF MINE

By G. P. Neel, M.D., Greenwood, S. C.

In a few issues of the Journal, perhaps the January, I told of the instantaneous cure of erysipelas by the application of phenol followed by absolute alcohol. I wish to add a few more specific use of drugs.

It is assumed that every one who consults a physician is carefully examined and every possible defect receives proper attention.

Antipyrine will cure herpes zoster immediately. I have seen one case in which a single dose of five grains completely relieved what promised to be a most violent case of herpes. Antipyrine has never failed in my experience to bring relief complete and full.

This drug, Antipyrine, will often relieve recurrent furunculosis.

It offers best relief and often cures neuritis, sciatica, and all kindred ills.

Recently I prescribed five grains to relieve the burning and awful discomfort in one of the worst cases of pemphigus, when morphine and other drugs failed to give any relief. I was very much surprised the following morning to be told by the sufferer she was relieved. I have only used the antipyrine in the one case, but for completeness and promptness of the cessation of all symptoms, even the disappearance of the discolorations, I believe it to be a specific.

Ferrous sulphate will relieve instantly any case of rhus poisoning. The "ic" salt might cure but I am a stickler for the "us." This drug will relieve cases of tinea contracted about bathing pools.

Adrenalin will relieve most cases of urticaria.

Urticaria and the vegetables poisonings, I believe should be classed with asthma and other like ills as among the allergical disease: Else why should one person suffer with poison ivy and other vegetables should they come, it would seem, within a mile of them, and another person handle with impunity?

EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M. D., F. A. C. S., CHARLESTON, S. C.

THE FREQUENCY OF MASTOIDITIS IN INFANTS

F. C. Helwig, M.D., and O. J. Dixon, M.D., Archives of Otology, February, 1930

Much controversy has arisen regarding the relationship between mastoiditis and acute nutritional disturbances in infants. Since the publication of Mariott, Alder, Floyd, Lyman and many others, a great deal of attention has been given to infections of the middle ear and the mastoid. The work of these men has been so startling that a great number of pediatricians and otologists have, we believe without careful investigations, more or less blindly followed their teachings.

The contention of most investigators has been that the ear infection acted as the primary focus, and that the enteric disturbances was secondary. The result has been a marked increase in the number of ear drums lanced and mastoids operated on.

"The mortality rate in infants with enteritis, who had mastoidectomies, was out of all proportion to the usual mortality rate; that is, six and four-tenths as against two and four-tenths normally."

(I have found the mortality rate so far very low but I give blood transfusions frequently.)

There have been two outstanding contributions to this subject from the standpoint of postmorten and histologic study. The first was by McMahon, who made a careful analysis of the histologic changes in a series of cases in which operation was done. In his first table, he cited eight cases, in six of which the patient died following operation. On analyzing the microscopic observations in the bone from this series, he found that the predominating features were edema, many red cells and pus cells. McMahon stressed the presence of edema. Bone necrosis, he stated, was either slight or not present. All these observations show the reaction to be obviously early and acute. (The edematous type of middle ear and mastoid infection I believe to be in a different class than the non-edematous type.) In a personal communication to the authors, he stated that the diarrhea-vomiting comples was of much longer duration, clinically, than the ear symptoms, when the latter were present.

His figures showed little difference as regards changes in the ears between infants dying from non-nutritional and those dying from nutritional disturbances, and he concluded that "the infection of the middle ear with, or without, mastoiditis, is, in infants at least, a prevalent complication of a large number of fatal illnesses, and that the opinion that this local aural infection is a factor of peculiar etiologic significance in acute nutritional disease is not borne out by these authentic figures.

This investigation comprises a series of 173 postmortem examinations taken in sequence from January 1927 to June 1, 1929. The patients came from the entire pediatric and otologic services of the Children's Mercy Hospital. The most interesting and instructive part of the study, is perhaps, the fact that the opinion of the attending staff regarding the etiologic significance of ear infection in enteritis was about equally divided. (This feature was also inconclusively discussed at the meeting of the Southern Medical last year in Miami.)

As can be seen, the incidence of the ear and mastoid infection was much higher in the non-enteric than in the enteric group. Both gross and histologic examination of these mastoids

and middle ears showed, in the majority of cases, little evidence of bony necrosis. In the mucus-containing type of mastoid, about all that was found was edema and swelling of the epithelium, although the mucus contanied pus cells and organisms. Sometimes, when frank suppuration was encountered, we found early bony nectosis, but oftener the bone was intact and the epithelium still present. In fact, the predominant picture was that of a purulent exudate, rich in pus cells, without death of bone. The presence of young connective tissue may readily be misinterpreted, since, in infants, matous tissue and young connective tissue are present in the antrum beneath the mucosa normally.

We do not think that the mastoid symptoms preceded the diarrhea-vomiting complex in the cases that we studied, since they resemble identically those found in the nondiarrheic child. In two cases of the enteric group, both gloss and histologic examination of the intestines showed old ulcerative changes in the mucosa. The ear disturbances were both grossly and histologically of brief duration. Only in three cases of the entire fifty-seven could the mastoid infection have been considered as the primary cause of death. In this series, 41.1 per cent of the infants who gave a history of diarrhea died following operation for mastoiditis. The bony changes were either slight or negligible, in most of them. In every case, the history of diarrhea antedated that of the ear infection.

Conclusion

1. In the usual fatal illnesses of infants, ear infection is a common terminal event.

2. Enteritis, as shown by necropsy, too frequently antedates the ear infection for one to assume that the latter is primary.

3. The mortality rate of these infants coming to operation was high and distinctly out of proportion to the usual mortality rate.

4. From this study we conclude that although surgical mastoiditis does occur in infants, its importance has been vastly over-rated.

I do not agree with all he concludes, but I like to see conclusions from post mortems.)

(The parts in parenthesis are added to the abstract.)

THE PUBLIC AND MEDICAL CONVENTIONS

Probably no professional men work harder or longer to acquire new knowledge than physicians. They are always at school. They are always exchanging discoveries, if not at conventions then through professional journals. The happy "hit" of one doctor becomes at once public property available to the hands of every colleague. They do not patent their inventions and mint the sufferings of mankind into cash. They are sentinels always on the watch and always eager to sound the alarm when a foe approaches or when an enemy can be beaten back.

Thus a medical convention is of greater interest to the community at large than a gathering of any other class of worker. They do not meet to create monopolies but to assemble free gifts for the world at large. A cancer discovery in Vienna—if it be true—increases the expectation of life in Saskatchewan, in the Malay States, in every land under the sun. The report of these conventions in the popular Press, couched in language understanded of the plain people, are of real and widespread educational value. To popularize medical knowledge is a public service. Nothing interests the average man so much as his health, and to be able to read what the best doctors in the world are saying about the particular malady that menaces him is a priceless boon. Yet these reports could not be printed if the medical men did not meet in open conference and discuss their difficulties as well as their achievements within the hearing of humanity as a whole.—Editorial: Montreal Star. Reprinted in Canadian Med. Assn. Jour., 21:336, 1929.

SURGERY

Carl B. Epps, B.S., Ph.G., M.D., F.A.C.S., Sumter, S. C.

ACUTE INTESTINAL OBSTRUCTION

Acute intestinal obstruction is generaly recognized as one of the most urgent of surgical conditions. And yet, the diagnosis is so often delayed until the patient is beyond all hope of relief.

In an article in The Lancet, entitled, "Acute Intestinal Obstruction," A. H. Burgess, an English surgeon, brings out some very important points concerning this condition. He quotes freely from H. S. Souttar's statistics, and first excludes all cases of strangulated hernia and idiopathic intussusception, saying that there is now no excuse for overlooking obstruction from either of these. After excluding these two causes, there are left 1042 cases, with 396 deaths, a mortality of 37.9 per cent. Surely, with more prompt diagnosis, and earlier operation, we can lower this terrible mortality.

The author blames, and rightly, I believe, delay in surgical treatment for this extremely high death rate. He claims that early diagnosis of this condition has not kept pace with improvements in the diagnosis of other groups of abdominal crises. He calls attention to the inadequate stress laid upon the early signs by the average textbooks. An especially important point that the author emphasizes is that fecal vomiting is an end-result, rather than a sign, of intestinal obstruction, and adds, significantly, "The man who waits for fecal vomiting will practically never make a mistake in diagnosis, but rarely, if ever, will he save his patient." Burgess makes an impressive plea against fatal hesitancy in making a diagnosis while waiting for the very late signs to complete the clinical picture. He says that the only hand that ever paints a complete pathological and clinical picture of any morbid state is the hand of Death.

A distinction is made between primary acute intestinal obstruction, coming like a "bolt from the blue," and secondary, which is engrafted upon the subacute, or chronic, obstruction. In the secondary, we can frequently see the outlines of individual dilated coils, and visible peristalsis passing along them, while in the primary form there is a thinning of the intestinal wall, and no visible peristalsis. It is noted that where the abdominal wall is very thin, as in an emaciated typhoid fever patient, a peristalsis may be visible without obstruction, but the coils are normal in size. Where peristalsis is visible in dilated coils the author states that we can feel safe in making a diagnosis of intestinal obstruction of several weeks duration.

The author calls attention to the important fact that an arrest of the blood circulation in the bowel makes the condition infinitely more urgent than does the mere stoppage of the bowel contents. A patient may recover after an arrest of faeces for even weeks, but no patient can long survive a complete obstruction to the bowel circulation. The acuteness of onset depends upon the degree of strangulation and the site of the obstruction; the higher the obstruction, the more acute the onset, generally speaking; one marked exception being volvulus of the sigmoid colon, which presents extremely acute symptoms. Sir Frederick Treves employed the term "peritonism" to describe the symptoms of an acute abdominal crisis, and it is applicable to acute primary intestinal obstruction. The pain being always referred to the epigastric region is, in the author's experience, of localizing value. The first vomiting, being a reflex act, depends more or upon the acuteness of the onset than upon the site, but the later vomiting is more marked the higher the obstruction is located. In very low obstruction, as from carcinoma of the rectum, vomiting may be absent throughout. The first material vomited consists of stomach contents, then it becomes of a bilious nature, and, still later, it is brown, with a faeculent odor, the so-called stercoraceous, or faecal vomit. The author claims that

the vomiting of actual faecal matter never occurs in intestinal obstruction, but only in cases of gastro-colic fistulae, although he says that cases have been reported as occurring in functional nervous diseases. Persistence is the chief characteristic of vomiting in intestinal obstruction. In diagnosis, it is important to remember that cessation of the passage of faeces, or of flatus, may not at first be complete. (I wish to go farther than does the author just here, and state that, even in the later stages, a passage of fecal matter may occur. I now have an illustrative case convalesing from an operation for acute intestinal obstruction. This patient had had severe, continuous pains in her abdomen, and severe nausea and vomiting, for 4 days before she entered the hospital. The day of entrance, the first enema, given before she entered the hospital, had good effect. A second enema, also given before entering hospital, but had slight results. The third enema, this one being given in the hospital, and followed immediately by an injection of pituitrin, returned clear, but, a few minutes later, the patient passed faecal matter almost normal in consistence. But the pain and vomiting continued, and an immediate laparotomy revealed a complete intestinal obstruction, near the lower end of the ileum, due to post-operative adhesions.)

If seen early, the distention of the coil above the point of obstruction may aid in localization but later the distention becomes general. Vomting decreases distention, and in high obstruction, with much vomiting, distention may be very slight. Obstruction in the small intestine gives a central distention in contrast to the barrel-shaped abdomen seen in sigmoid obstruction. Distention is extremely rapid in volvulus of the sigmoid, the distention being in the twisted loop itself. We can sometimes feel a mass in acute intussusception, and in malignant disease. Auscultation may reveal turbulent gurgling in cases of mechanical obstruction that will aid us in distinguishing this condition from the death-like silence of paralytic ileus.

Rectal examination may enable us to discover a rectal stricture, or growth, or we may be able to feel the mass of an intussusception. Since the sigmoidoscope can be passed from 8 to 11 inches upward, its use may be a great aid in diagnosis. About 91 per cent of obstructions in the colon are due to carcinoma, and we usually have symptoms such as coliky pains after meals, diarrhoea alternating with constipation, and large quantities of mucus in stools, perhaps stained with blood, before acute obstruction occurs. If we can definitely locate the obstruction in the large intestine, we may rest assured that it is a 9 to 1 chance that we have a malignancy. On the other hand, if it is not in the large intestine, it is almost a 300 to 1 chance that it is not a malignancy.

The author considers operation as the only tratment for mechanical obstruction, but mentions accessory forms of treatment, to be used with caution, such as gastric lavage, introduction of saline solution subcutaneously, or intravenously, administration of anti-gas gangrene serum, and bile enemeta.

He advocates spinal anesthesia. In early cases, removal of the obstruction is best, but we may have to resort to a short circuit operation, or construction of an artificial anus. In late cases, where the obstruction is known to be in the large intestine, with patient in poor general condition, he considers a blind caecostomy best. While this relieves the obstruction, it does not give us information as to exact site, or nature of obstruction, or knowledge as to metastases, etc, but may prevent many immediate operative deaths. One danger is that it may cause us to not discover a condition that will lead to perforation and peritonitis. Statistics, however, show that we stand only a 1.5 per cent chance of this, and this per cent is, in all probability, far less than the mortality increase due to more extensive operation. If we are not sure of the location, then exploratory laparotomy is indicated. If caecum is distended, he advocates simple blind caecostomy. If caecum is collapsed, then rapidly examine hernial orifices for strangulation. He does not advocate blind caecostomy for small intestine obstruction because "even after relief of the obstruction by an enterostomy the risk of unreleived strangulation remaining would be at least 42.6 per cent."

SOCIETY REPORTS

REGUAR MONTHLY MEETING OF THE ANDERSON COUNTY MEDICAL SOCIETY HELD AT JOHN C. CALHOUN HOTEL, WEDNESDAY MARCH 12th, 1930.

The meeting was called to order by the President, Dr. Thos. R. Gaines with the following members present:

Drs. Bare, Barton, Clinkscales, Daniel, Dean, Dendy, Epting, Gaines, Harris, Hentz, Hobson, Land, Frank Lander, W. T. Lander, J. W. Martin, Smethers, Sanders, Shirley, Thompson, Townsend, Weathersbee, Wrenn, C. H. Young.

The minutes of the last meeting were read and approved.

At the January meeting, Dr. Frank Lander suggested that place of meeting be changed to Anderson County Hospital. A committee was appointed to decide upon this matter. Dr. E. E. Epting Chairman, reported that committee had decided Anderson County Hospital was not a suitable place for meetings. Dr. S. C. Dean moved that we continue to meet at the John C. Calhoun Hotel; seconded and carried.

Scientific Program—Drs. J. N. Land and Frank Wrenn read very interesting papers, Dr. Lands subject being—"Conservative Gynecology," Dr. Wrenn's being "Uterine Hemorrhage," explaining X-ray treatments for this trouble. These subjects were discussed very interestingly by Drs. S. C. Dean, G. S. Clinkscales, H. M. Daniel, Frank Lander, and E. E. Epting. These papers and discussions proved of general interest to all present.

There being no further business, the meeting adjourned for the regular luncheon.

D. J. Barton, M.D.,
Sec.-Treas.

MARLBORO COUNTY MEDICAL SOCIETY.

Tribute to memory of the late, Dr. Charles Spencer Evans

Dr. Charles Spencer Evans was born in Marlboro County on November 3rd, 1863. He was a graduate of the Citadel in 1886 and graduated from the South Carolina Medical College in Charleston in 1891. He located for the practice of his profession in Clio, S. C. where he lived until he died on July 9th, 1929 at Martinsville, Va. while on a visit to his daughter, Mrs. W. R. Broaddus. He was a devout member of the Baptist church. Dr. Evans was Sea Board Surgeon at Clio, a member of the South Carolina Medical Association, a member of Aurora Lodge No. 53 of Masons. He was a beloved physician, a leading member of his church, a citizen of the finest character whose admirable and cheerful disposition endeared him to all who knew him. He was buried at Clio, S. C.

Whereas: We the members of the Marlboro County Medical Society desire to place on record our testimony of love and appreciation in which Dr. Evans was held by us—

Whereas: We also wish to testify to his worth and standing in our community; Therefore be it resolved:

First: That in his death we have lost one of our most devoted members, our county and the town of Clio one of its truest and most loyal citizens.

Second: That Dr. Evans exemplified in his daily life all those principles that represent the best in our medical profession, always looking to the interest and welfare of his patients, never considering himself or his own comforts when he could do something to relieve the sick and suffering. As a citizen he was active and alert to everything looking to the advancement of his community, never shirking or evading any duty or obligation laid upon him, never putting off for tomorrow what could be done today, always putting forth his best efforts in anything he undertook.

Third: That a page in our minutes be inscribed to his memory and that a copy of these resolutions be sent to his family, to the Journal of the South Carolina Medical Association, and to the Pee Dee Advocate.

Charles R. May, M.D.
C. D. Napier, M.D.
Committee from Marlboro County Medical Society.

SPARTANBURG COUNTY MEDICAL SOCIETY MEETING

The regular monthly meeting of the Spartanburg County Medical Society was held February 24, 1930 in the dining room of the General Hospital. The meeting was called to order by the President and the minutes of the January meeting read and approved.

Three moving picture films were then shown. The first film demonstrated the correction of postural defects in children, the second film showed the influence of some common drugs on gastro-intestinal motility, and the third showed the effect of cholecystokinin on intra-gall bladder pressure.

The first film was presented by Dr. D. Lesesne Smith. Dr. Smith urged the correction of postural defects in children. Dr. Smith stated that parents were often now aware of these postural defects. Rickets is the underlying cause of most postural defects. The child with rickets looks remarkably well up to 2 years of age, but the postural defects begin to appear from the sixth to the eighteenth month. Sometimes the faulty posture is due to overexercise. Many of these children also are allowed to stay up too late at night, drink coca cola, and most of them do not sleep well at night. Many children that complain of growing pains in the legs have flat feet. Stoop shoulders should be corrected by having the patient stand with the back flat against the wall and taking proper exercises. Flabby stomach muscles allow the abdomen to protrude too much and indigestion and constipation result. Five pound sand bags laid on the abdomen aid in correcting this condition.

Dr. J. J. Lindsey nominated Dr. J. Warren White of Greenville, Dr. A. J. Jervey, Dr. M. C. Palmer, and Dr. Earle Grady of Tryon, N. C. as members of the society. The motion was seconded and carried.

There being no further business the meeting adjourned.

C. W. Bailey, President.
W. M. Sheridan, Sec.-Treas.

REGULAR MONTHLY MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY HELD IN THE LECTUE HALL, CITY HOSPITAL, MONDAY, MARCH 10th, 1930.

The meeting was called to order by the President, Dr. Guess at 8:00 P. M. with about fifty members and guests present.

Dr. Brown was asked to act as Secretary as the Secretary was detained. The minutes of the last meeting were not read as the Secretary was not present at the opening of the meeting.

Reports of clinical cases were then called for. Dr. Metts reported a case for diagnosis—the patient was that of a girl brought into the hispital in coma, with temperature and absence of reflexes.

Dr. Tyler reported two cases, one of kinked ureter, and another of gunshot wound of the knee and abdomen.

The President then called upon Dr. Bruce, the first essayist of the evening, who presented a splendid treatise on "Cardiac Pain with especial reference to Disease of the Coronary Arteries." Dr. Bruce stated that the subject of cardiac pain is so vast, that his discussion would be confined to angina pectoris. He also stated that the part played by angina in producing cardiac pain is of less frequency than was formerly thought.

The death rate from heart disease has increased 40 per cent during the past twenty-five years. The death rate from heart disease in the State of Illinois was also mentioned as being excessive. Many diseases of the heart can be prevented, for example heart disease following the infectious disease. Dr. Bruce stressed that the true symptoms of angina are often taken too casually by the physician, and consequently the necessary medical advice is often not given. Alexander Lambert has stated that angina pectoris is not a disease of itself; it is a symptom complex, and the disease is thought to kill by vagal inhibition.

The classification of causative agents were mentioned as follows:

1. Vascular hypertension.
2. Myocardial degeneration.
3. Aortitis (syphilitic or rheumatic).
4. Rupture of aorta.
5. Coronary disease.
6. Tobacco.
7. Pericarditis.
8. Cardiac neuroses.
9. Pathology of undertermined origin.

The sudden onset of the symptoms of angina are poorly understood. Bamberg has insisted that there is something that sets in motion the motor neurones of the heart.

At autopsy, the most common lesion found is a sclerosis of the first portion of the aorta, and pericarditis around the base of the heart is very common. The finding of obliterating thrombi at autopsy are not common. These thrombi may be found at autopsy when they have been no symptoms of angina pectoris.

Angina occurs in men, usually at the time that arteriosclerosis begins. These attacks are brought on by both mental and physical exertion. Valvular lesions of the heart are not accompanied by anginoid pain unless the aortic valve is involved. Pressure on the sensory nerves of the aorta is thought to be the immediate cause of anginoid pain.

The next essayist of the evening, Dr. Anderson, then continued the discussion of "Cardiac Pain" in a very able manner, first giving the cardinal symptoms of angina pectoris, as follows:

1. Sudden praecordial pain, usually radiating down the left arm.
2. Cold sweats.
3. Slow, soft pulse.
4. Blood pressure unchanged, or low.
5. Distant heart sounds.
6. Flatulence.

Early in the disease mental or physical exertion precipitates attacks of angina.

Dr. Anderson then mentioned Harrison's types of anginoid pain, namely: 1. Chronic praecordial pain not relieved by nitrites, 2. Pericarditic pain, and 3. Severe abdominal pain due to liver congestion. Angina must be differentiated from the pain

of aortitis and myocardial degenration or myocarditis.

Two brief case histories were then discussed.

Syphilis is a common cause of aortitis at the same time involving the coronary arteries, and damaging the myocardium, which subsequently brings on myocardial degenration.

Establishing a prognosis in angina pectoris is hazardous. The electrocardiograph is of much value in establishing a prognosis.

The treatment depends upon the prognosis. Exertion should always be avoided, and an effort made to establish peace of mind in the patient. Codeine, amyl nitrite, bismuth are said to be useful drugs; heat and diathermy may be of value. Digitalis is of value in angina due to myocardial degeneration. Theominal has also shown some favorable results following its administration. Discussed by Dr. Hugh Smith.

The physiology of the digestive tract was then illustrated with moving pictures through courtesy of the Deshell Laboratories.

A communication from Dr. Hines, Sec. of the State Medical Association regarding petition for a Veterans' Hospital in this State was read by the Secretary. Dr. Wilkinson moved that such petition be forwarded to the Congressman of this District; seconded by Dr. Brown and carried.

Another communication from Dr. Hines relative to changes in the State Medical Society Constitution was then read. It was moved, seconded and carried that these changes be endorsed by the Greenville County Medical Society.

Dr. Davis moved that our delegates be instructed to invite the State Medical Association to meet in Greenville in 1931; seconded and carried.

Dr. Wolfe moved that this body go on record as disapproving of City Council's action in regard to the present status of the Board of Governors of the City Hospital, and that our representatives in the Legislature be instructed to oppose this measure; seconded by Dr. Fair. Discussed by Drs. Fair, Brown, Murray, W. L. Bates. The motion was put to a vote and lost.

Dr. Davis moved that the Secretary telegraph Senators Blease and Smith to oppose changes in the present Harrison Narcotic Act; seconded and carried.

Dr. Davis moved that a special call meetinug be held on March 28th and that a "Dutch" supper be held in honor of Dr. Paul White of Boston. Amendments: that the regular monthly meeting for April be cancelled, and that the neighboring medical societies be invited to attend this meeting; seconded and carried.

Dr. Brown moved that the Secretary write a letter of thanks to the Deshell Laboratories for the moving pictures shown; seconded by Dr. Davis. Discussed by Drs. Tyler and Brown. The motion was put to a vote and lost.

There being no further business, the meeting adjourned.

Irving S. Barksdale, M.D.,
Secretary.

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL TUESDAY EVENING, MARCH 11th, 1930 AT 8:30 O'CLOCK.

The meeting was called to order by the President, Dr. J. Sumter Rhame.

Present: Doctors: Allen; A. E. Baker, Jr.; B. R. Baker; Ball; Banov; Beach; Buist; Burn; Byrnes; Cain; Cannon; Chamberlain; de Saussure; Jackson; F. B. Johnson; Kollock; Lynch; McCrady; Mood; O'Driscoll; Pearlstine; Phillips; F. R. Price; Prioleau; Rhame; R. B. Rhett; W. M. Rhett; W. P. Rhett; Richards; Rutledge; Sanders; W. A. Smith; Taft; Townsend; Waring; I. R. Wilson; Robert Wilson; I. R. Wilson, Jr.; Bold. (39).

Guests: Dr. Young, of Columbia, S. C.; Dr. Woods of the Medical College; internes, and senior medical students.

The minutes of the meeting of February 25th were read and confirmed.

Under Reports of Officers and Committees, Dr. G. McF. Mood, Chairman of the Board of Commissioners, brought to the attention of the Society the efforts which the Board had been using to secure a new wing for the Roper Hospital. He stated that a supplementary budget, pointing out the needs of the Hospital for additional facilities for the care of contagious, mental, and orthopedic cases, had been submitted to City Council, and that they had stated that the City could no nothing at the present time. He said that the County Delegation had been approached and that the matter had been taken up with Dr. Rankin, of the Duke Foundation. The Board had estimated that it would cost three hundred thousand dollars $300,000) to cover the cost of the facilities desired. In view of the favorable attitude of the Delegation, and of Dr. Rankin's approval of the project, the Board had asked the County for one hundred thousand dollars ($100,000), the Duke Foundation for one hundred and twenty-five thousand dollars ($125,000), and with the assurance of a gift of fifty thousand dollars ($50,000) from a citizen, along with the utilization of twenty-five thousand dollars ($25,000) from the Henry Ross Memorial, they felt that it seemed probable that this money would be secured. The County proposes to float bonds to raise the hundred thousand dollars, and requested that he secure the opinion of Mr. J. N. Nathans, and that Mr. Nathans draw up a suitable bill for introduction in the House. Dr. Mood stated that it was the opinion of Mr. Nathans, Attor-

ney at Law, that the County could not contribute one hundred thousand dollars ($100,000) toward the erection of the addition to the Roper Hospital if the money was to be raised by the County from the sale of County notes payable over a period of years, as a debt could not be contacted by the County, except for County purposes, and as the scheme proposed would not make the building to be erected a County building, to issue notes would not be legal. That, however, the matter could be handled as a County proposition if the Medical Society would convey to Charleston County a portion of the land on which the contemplated improvements were to be erected, and the County could then erect its building upon this plot of land, and the building and land would then be a County-owned property. That the management of the building could be put in the hands of the Society and to all intents and purpose, so far as the administration was concerned it would be the same as if the original plan had been carried out, except the Society would not be the owner of the building. That after the notes were paid up, some arrangements could probably be made, whereby the County would turn over to the Medical Society that portion of the building, in consideration of the Society keeping it open for the care of the County sick, and the consideration for this conveyance would be a nominal sum. That with this aim in view the following bill has been drafted to be presented to the Charleston County Delegation for passage:

To provided for the erection by Charleston County of a hospital building in the City of Charleston for the treatment of contagious and other diseases, and for the management of said hospital, and for the issuance of notes of Charleston County in the sum of One Hundred Thousand ($100,000) Dollars to meet the cost of such erection and to provide for the payment of said notes:

Be it enacted by the General Assembly of the State of South Carolina:

WHEREAS, it is necessary for the public welfare that a hospital building should be erected in Charleston County for the treatment of contagious and other diseases and the site therefor is about to be donated to Charleston County by the Medical Society of South Carolina, Trustees of Roper Fund, adjacent to Roper Hospital in the City of Charleston, now managed and controlled by said Medical Society of South Carolina, Trustees of Roper Fund, and by reason thereof the management of said hospital can be more economically and satisfactorily handled by said Medical Society of South Carolina:

Section 1. That Charleston County be and is hereby, authorized and empowered to erect in the City of Charleston a hospital building for the treatment of contagious and other diseases, said building to be erected under the supervision and direction of the Medical Society of South Carolina, Trustees of Roper Fund, and to be located immediately adjacent to the Roper Hospital in said City. Said hospital when erected shall be managed by the Medical Society of South Carolina, Trustees of Roper Fund.

Section 2. To meet the cost of such construction coupon notes of Charleston County, in the aggregate sum of One Hundred Thousand $(100,000.00) Dollars, are hereby authorized and directed to be issued, said notes to be in denominations of One Thousand ($1,000.00) Dollars and Five Hundred ($500.00) Dollars each, shall mature in equal successive annual series or installments of Twelve Thousand Five Hundred ($12,500.00) Dollars each, the first series or installment to mature one year after their date, shall bear such rate of interest not exceeding five per cent per annum, payable semi-annually it shall be the lowest rate of interest at the highest price bid for said notes at the sale thereof; said interest to be evidenced by interest coupons attached to said notes. Both principal and interest shall be payable at such bank in the City of New York as may be designated by the Treasurer of Charleston County. The said notes shall be signed in the name of the County by the County Supervisor and Treasurer of Charleston County and the seal of the County Supervisor impressed thereon, but the facsimile signatures of said County Supervisor and Treasurer lithographed or engraved on the interest coupons attached to said notes shall be a sufficient signing of the same. The full faith and credit of Charleston County shall be pledge for the payment of said notes both principal and interest.

Section 3. The said notes shall be sold by the County Treasurer upon competitive bids after not less than one advertisement of sale published in at least one newspaper. The proceeds of sale shall be held by the County Treasurer and paid out for the construction of said hospital building upon vouchers signed by Chairman of Board of Commissioners of Roper Hospital and Secretary of said Board, their vouchers to be a complete discharge of said County Treasurer for payment of said fund.

Section 4. There shall be annually levied by the Auditor, and collected by the Treasurer, of Charleston County, S. C., an annual tax upon all taxable property in said County sufficient to pay the principal and interest of said notes, as they mature.

Section 5. Before said notes shall be issued the question of the issuance thereof shall be submitted to the qualified voters of Charleston County at the general election to be held in said County in November, 1930, and unless a majority of said voters who may cast their ballot on said question at said election shall vote in favor thereof, said notes shall not be issued.

Section 6. This Act shall take effect immediately upon its approval by the Governor.

It will be noted that there is no provision in this bill about turning over the building to the Society at the end of the term during which the notes were outstanding, as it was feared that it might be an illegal provision in the Act, and that, therefore, there should be no legislation thereon at present, and this question should be left to the good faith of the Delegation. That it is necessary for this Society to adopt resolutions authorizing the transfer of the tract of land to Charleston County, and that resolutions to that effect should be adopted.

THEREUPON, on motion duly made and seconded, the following resolution was unanimously adopted:

RESOLVED: that the Medical Society of South Carolina, Trustees of Roper Fund, do convey to Charleston County the following piece, parcel or tract of land, situated in the City of Charleston and described as follows:

Located on Mill Street just west of the Western Wall of the North-East Wing of the Roper Hospital, measuring 35 ft. on the east line, 60 ft. on the south line, 35 ft. on the west line, and 60 ft. on the north line. Bounded on the north by Mill Street, on the east by land of the Medical Society of South Carolina, Trustee under the Will of Thomas Roper, on the south by land of the Medical Society of South Carolina, Trustees under the the Medical Society of South Carolina, Trustee under the Will of Thomas Roper.

Subject, however, to the covenant running with the land that there shall be erected by Charleston County upon said strip of land a hospital building. That the said Deed be signed by the President and Secretary of this Society, under its Corporate Seal, and that the consideration expressed in said Deed shall be the sum of Five ($5.00) Dollars.

The Secretary read the following proposed amendments, submitted to him by Dr. Edgar A. Hines, Secretary of the South Carolina Medical Association:

"To amend Section II, Article IV of the Constitution by adding to the present paragraph the following: "whose dues and assessments for the current year have been received by the Secretary" so that when so amended will read: "The members of this Association shall be the members of the Component Medical Societies whose dues and assessments for the current year have been received by the Secretary."

To amend Article VI of the Constitution by rejecting the present Section in its entirety and substituting the following:

"The Council shall be the Board of Trustees of this Association and shall constitute the Finance Committee of the House of Delegates. The Council shall have full authority and power of the House of Delegates between Annual Sessions, unless the House of Delegates shall be called into Session as provided in the Constitution and By-Laws. It shall consist of the Councillors, the President, the President-Elect, the Secretary Treasurer and a speaker of the House of Delegates, of the Association. Four (4) of its members shall constitute a quorum."

To amend Article LX, Section I of the Constitution by striking out the words, "three Vice Presidents" and substituting the words, "a President Elect, a Speaker of the House of Delegates," so that when amended shall read: "The officers of this Association shall be a President, a President Elect, a Speaker of the House of Delegates, a Secretary Treasurer and eight (8) Councillors."

To amend Chapter III, Section I of the By-Laws by striking out the words, "one of the Vice Presidents" and substituting the words "President Elect," so that when so amended shall read "all regular members may attend and participate in the proceedings and discussions of the general meetings and of the Sections. The general meeting shall be presided over by the President or by the President Elect," etc.

To amend Chapter VI, Section I of By-Laws by striking out the words, "and of the House of Delegates" and substituting therefor the words "except the House of Delegates" so that when amended will read "The President shall preside at all meetings of the Association except the House of Delegates," etc.

To amend Chapter VI, Section II of the By-Laws by striking out the words, "Vice Presidents" in the first line and substituting the words, "President Elect" and in the third and fourth lines strike out the words, "the Council shall elect one of the Vice Presidents" and substituting the word "President Elect" and by adding to the last sentence the following "and shall be a member of the Council Ex-Officio" so that when amended shall read, "The President Elect shall assist the President in the discharge of his duties. In the event of his death, resignation or removal, the President Elect shall succeed him and be a member of the Council Ex-Officio."

To amend Chapter VI, By-Laws, by adding an additional section to be known as Section III which shall read as follows: "The Speaker of the House shall preside over the House of Delegates. He shall make every effort to expedite the business of the House by appointment of such Reference Committees, etc., as deemed necessary. In case of his absence the House shall appoint a Speaker Pro Tem."

It was moved, seconded and carried that this Society go on record as approving the proposed amendments and that the delegates be instructed to vote for them.

Under Miscellaneous Business, Dr. Cannon brought up the matter of a member who stated that he had joined the Society in May, 1905, and requested a ruling from the President as to whether or not this member was eligible for election

as an Honorary Fellow. The President ruled that he was not eligible, as he had not been continuously a member, and paid his dues, for twenty-five years, and that he would be eligible, however, at the close of the present calendar year.

Dr. F. G. Cain brought to the attention of the Society the bill in Congress known as H. R. 9054 which had for its purpose the creation of a narcotic dictator, and pointed out some of the disadvantages of the bill and possible injustice that might result to the medical profession, should it be passed. He then moved that this Society make a protest to our representatives in the House and Senate of the United States, against the passage of this bill. This was seconded and carried.

Dr. A. J. Buist called to the attention of the members of the Society the proposed campaign of the Board of Health against diphtheria, especially the use of toxin antitoxin, and urged every member to advise his patients to take the inoculations. His remarks called forth some discussion, in which the President, Dr. Banov and Dr. Robert Wilson took part.

The Scientific Program was called at 9:00 P. M.

Dr. R. L. McCrady read a short paper on posterior positions. This was discussed by Dr. H. W. de Saussure.

Dr. J. H. Cannon presented a case of Heart Disease.

Dr. J. F. Townsend presented a short paper on "The Ear," in which he demonstrated certain important points of the anatomy and pathology by lantern slides. This was discussed by Dr. R. B. Rhett, Dr. K. M. Lynch and Dr. F. R. Price.

Dr. K. M. Lynch reported two cases of Aspergillosis of the Lung. He discussed the disease, and presented micro-photographs made of these cases. This was discussed by Dr. F. B. Johnson and Dr. W. P. Rhett.

There being no further business, the meeting adjourned.

W. Atmar Smith, M.D.,
Secretary.

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL TUESDAY EVENING, MARCH 25th, 1930 AT 8:30 O'CLOCK

The meeting was called to order by the President, Dr. J. Sumter Rhame.

Present: Doctors: Allen; A. E. Baker; A. E. Baker, Jr.; Ball; Banov; Beach; Buist; Burn; Byrnes; Cannon; Cathcart; Chamberlain; Deas; de Saussure; Finger; F. B. Johnson; Lynch; McCrady; Maguire; Mitchell; Mood; Moore; Palmer; E. F. Parker; Pearlstine; F. R. Price; Prioleau; Rhame; W. M. Rhett; W. P. Rhett; Richards; Sanders; Scharlock; Scott; J. E. Smith; W. A. Smith; Taft; Waring; Wild; I. R. Wilson; Robert Wilson; Whaley; I. R. Wilson, Jr. (43).

Guests: Dr. F. H. McLeod and Dr. W. R. Mead, of Florence, S. C.; Dr. P. M. Temples and Dr. C. B. Woods, of the Medical College.

The minutes of the meeting of March 11th were read and confirmed.

The Secretary presented the application of Dr. L. S. Hay for membership in the Society. This was referred to the Board of Censors.

Dr. Robert Wilson, reporting for the Chairman of the Committee on the Parade celebrating the 250th anniversary of the establishment of Charleston, exhibited a preliminary drawing of the float which the committee had arranged for this occasion, and stated that it would cost three hundred dollars ($300.00). He requested that the Society appropriate this amount. It was moved, seconded and carried that this amount be appropriated for the participation in the celebration.

The Secretary reported that he had received letters from Senator E. D. Smith and Representative Thomas McMillian, stating that they would look into the matter of the House Bill 9054, against the enaction of which this Society protested at its last meeting.

Under Miscellaneous Business, Dr. E. F. Parker stated that at the next meeting of the Society he would propose a motion that this Society go on record as opposing the poisoning of alcohol.

Dr. M. W. Beach proposed the following resolutions:

"WHEREAS, both the County and City of Charleston make appropriations that are donated to the Roper Hospital for the care and treatment of their sick poor, and

"WHEREAS, the Roper Hospital has ample and better facilities for this purpose than has any other institution in the City and

"WHEREAS, the establishment of other Clinics for the prophylactic or therapeutic treatment of patients at the expense of the City and County not only adds to the burden of the tax-payers, but encourages those who are able to pay for medical services to seek such services at the tax-payers' expense.

"THEREFORE, BE IT RESOLVED that the members of the Medical Society of South Carolina as Trustees of the Roper Hospital and, therefore, under contract to give medical service to the sick-poor of the County and City, and also as tax-payers, decry the activities of the City and County Boards of Health in establishing Clinics for prophylactic and therapeutic treatment of patients at the Health Center, inasmuch as such Clinics are unnecessary and unwise and only add to the burden of the taxpayer.

"BE IT FURTHER RESOLVED that the representation of the Medical Society of South Carolina on the Board of Health be instructed to ex-

press the views of the Medical Society to the Board and to use his influence to have these Clinics discontinued."

This evoked considerable discussion, in which the following members took part: Drs. E. F. Parker, W. M. Rhett, Banov, Lynch, W. A. Smith, Robert Wilson, Maguire, I. R. Wilson, Burn, Cathcart, F. R. Price, Chamberlain and Cain. It was moved, seconded and carried that the resolution be referred to the Committee Investigation of Charity Services for report at the next meeting.

At 9:00 P. M., the Special Order of Business, the presentation of the portrait of Dr. J. Somers Buist, was taken up. Dr. R. S. Cathcart, in rising to introduce Dr. E. F. Parker, said:

"Mr. President, a large number of the members of this Society, consisting of former associates and former students of Dr. J. Somers Buist, and some of the younger members who wished to join with us in perpetuating the memory of Dr. Buist in these halls, have had a portrait made of him, and we have requested Dr. Edward F. Parker to present it to you."

Dr. Parker, in the presentation of Dr. Buist's portrait, made the following remarks:

"Mr. President: Time I trust has scattered into flight any lingering clouds of sadness that could make this other than a happy occasion.

"Some weeks ago, one of our members made the suggestion that so many as chose unite to perpetuate in some manner the memory of a distinguished physician and surgeon in his day and generation, and one of our former Presidents. Such ready response was met that this evening I have been kindly given by the donors the valued privilege of presenting to the Society a portrait of the late Dr. J. Somers Buist.

"Having enjoyed a close association with him, it is hard to realize that Dr. Buist passed from our midst twenty years ago and yet, recalling him brings to my mind some touching and pertinent lines which have largely prompted what I say:

'At every board, a vacant chair, Fills with quick tears some tender eye,
And at our maddest sport appear, Those well loved forms that will not die.'

"His virtues found their expression in a winning smile, a warm heart, and an affectionate disposition which endeared him to those who came within their touch. His abilities had full play in the various avenues and activities of professional, business and social life and all combined to make a career unusually full of honors and achievements. His courage was true and tried at the first beat of his Country's War Drums. His engaging personality, keen sense of enjoyment of contacts with his fellows, and fluency and charm as a speaker always added to the brilliancy and success of anything and everything in which he participated.

"Mr. President, I might easily say more, but the language of Truth is short and simple! So on behalf of those I represent, I ask you to accept the portrait to have and to hold and to hang in the Society's Hall along with others who in days gone by made our history notable and honorable."

Dr. Robert Wilson then arose and said that he desired to speak in a personal way. He said that Dr. Buist had been his preceptor in medicine and he paid a high tribute to the sterling qualities of Dr. Buist, expressing himself as being highly gratified to see Dr. Buist's portrait presented to this Society.

The President, in behalf of the Society, accepted the portrait of Dr. Buist in a most gracious manner.

Dr. A. J. Buist then expressed his feeling of gratitude to the friends of his father who had made possible this occasion.

The Scientific Program was then taken up.

The President requested Dr. O. B. Chamberlain to introduce Dr. Walter E. Mead, of Florence. Dr. Chamberlain, in a few very well chosen words, introduced the first speaker of the evening. Dr. Mead then presented a very able paper on "Intestinal Obstruction—A Review of the Pathological Processes Underlying Certain of the Symptoms."

The President then asked Dr. A. E. Baker to introduce Dr. F. H. McLeod, of Florence, as the next speaker. Dr. McLeod expressed his pleasure at being invited to address the Society and made an excellent address on the "Surgical Aspects of Intestinal Obstruction."

At the conclusion of these papers, the meeting adjourned.

W. Atmar Smith, M.D.,
Secretary.

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL TUESDAY EVENING, FEBRUARY 25th, 1930, AT 8:30 O'CLOCK

The meeting was called to order by the President, Dr. J. Sumter Rhame.

Present: Doctors: Allen; Ball; Beach; Beckman; Bowers; Buist; Burn; Cannon; Cathcart; Jackson; Kollock; McCrady; Maguire; Palmer; E. F. Parker; W. H. Price; Prioleau; R. B. Rhett; W. P. Rhett; Richards; Rutledge; W. A. Smith; Townsend; Waring; I. R. Wilson; Robert Wilson; Whaley; W. H. S. Speissegger; I. R. Wilson, Jr.; Sughrue; Elston. (31).

Guests: Dr. Hawkins Jenkins, of Mullins, S. C.; Dr. Morton, of the U. S. Navy; and Dr. Hinsdale, of White Sulphur Springs, West Virginia.

The minutes of the meeting of February 11th were read and confirmed.

The Secretary read a letter from Dr. E. A. Hines, Secretary of the State Medical Association, requesting that the Society adopt the following resolution:

"WHEREAS, the physicians of South Carolina in their daily contact with disabled veterans of the World War find and have found for years past that many deserving veterans in need of hospital treatment have been unable in many cases to get admitted to Government hospitals and in many other cases have had to wait an unreasonable length of time for admission and this situation is due entirely to a lack of adequate hospital facilities for such cases, and

"WHEREAS, it has been apparent to the medical profession for several years past that there is an urgent need for a general hospital in South Carolina for the care and treatment of disabled veterans and that the need is becoming more urgent each year, and

"WHEREAS, there has been introduced in Congress a bill known as the Fulmer Bill H. R. 9411, which would authorize an appropriation of One Million Dollars to enable the Director of the United States Veteran Bureau to provide hospital facilities for the State of South Carolina by the erection of a three hundred bed hospital plant, now, therefore,

"BE IT RESOLVED, by the Anderson County Medical Society at its regular meeting this 12th day of February, 1930, that we unanimously endorse the said measure and petition the Congress of the United States to enact it into law, that the deplorable situation caused by lack of hospital facilities for veterans of this State may be remedied."

After some discussion, it was moved, seconded and carried that action be deferred until after the meeting of the State Medical Association.

Under Unfinished Business, the President appointed the following committee to arrange for the float which the Medical Society had agreed to place in the parade for the 250th anniversary celebration of the founding of Charleston. Dr. C. W. Kollock, Chairman, Dr. Edward Rutledge, Dr. P. G. Jenkins, Dr. Robert Wilson, Dr. W. C. O'Driscoll, Dr. John Sugrue, and Dr. J. I. Waring.

Under Miscellaneous Business, Dr. Edward Rutledge pointed out the fine constructive work that Dr. R. S. Cathcart has done for the members of this Society, especially in regard to the erection of the Roper Hospital, and the development of its various departments, over the past twenty-five years. He said that he felt that it would be a splendid thing to honor Dr. Cathcart while he was living and with us, rather than to wait until he had completed his career here, as he would then know how much the Society thought of him. He then moved that Dr. Cathcart's portrait be painted at the expense of the Society, and hung on the walls of its meeting place. Dr. E. F. Parker, rising to second Dr. Rutledge's motion, made the following remarks:

"Nothing could give me greater pleasure than to second Dr. Rutledge's motion. The remarkable expansion of the Society's activities in the past twenty-five years finds us today financing and managing a half million dollar Hospital Plant through a Board of Commissioners and investing and administering a half million dollar Trust Fund through a Board of Finance. The various changes have required unusual executive ability, tireless energy and the expenditure of an enormous amount of time. In their accomplishment, Dr. Cathcart has been the master mind and master worker. I feel that the compliment now proposed will be a graceful and well-deserved recognition of his notable and unselfish services."

Dr. C. W. Kollock and Dr. Robert Wilson also spoke in praise of the doctor, and pointed out that it was a well-deserved honor. On vote, the motion was carried unanimously. It was moved, seconded and carried that the Chair appoint a committee to put this motion into effect. The President appointed the following committee: Dr. Edward Rutledge, Dr. E. F. Parker, and Dr. J. H. Cannon.

Dr. A. J. Buist brought to the attention of the Society the occupation tax bill which is before the legislature. He said that it was his opinion that the tax was unfair, and pointed out many of its defects. He then proposed the following resolution, which was unanimously adopted:

Resolved: That the medical profession of Charleston County views with surprise and alarm the proposed bill in the state legislature to impose an occupation tax upon certain professions and business, among which is the medical profession.

That in its opinion the proposed tax as outlined in the daily papers appears to be an attempt at unjust class legislation and in no way distributes the cost of government equably amongst its citizens, but only increases the burden of those who are now overloaded.

The medical profession of this county is not opposed to an occupational tax, if such a tax is deemed necessary to the conduct of government but thinks that such a tax should be required of all those acquiring an income above a certain amount, as a result of their labors, irrespective of the source of that income.

That a copy of these resolutions be sent to the Charleston County Delegation with the request that they be earnestly considered, and to the press for publication.

At the request of the President, Dr. C. W. Kollock, in a very delightful manner, introduced Dr. Hinsdale, of White Sulphur Springs, West Virginia. Dr. Hinsdale responded, expressing gratification at being present and being able to meet the members of this old medical society.

The Scientific Program was called at 9:00 P. M.

Dr. J. P. Palmer presented an able paper on "Spontaneous Pneumothorax," and demonstrated his cases with X-ray pictures. This was discussed by Dr. J. A. Ball and Dr. W. A. Shith.

Dr. J. H. Cannon presented a paper on "Some Fundamental Considerations of the Diagnosis of Heart Disease." The discussion was opened by Dr. Robert Wilson, Dr. Townsend and others taking part. Dr. Cannon closed the discussion, after which the Society adjourned.

W. Atmar Smith, M.D.,
Secretary.

WOMAN'S AUXILIARY
South Carolina Medical Association

OFFICERS

President, Mrs. W. H. Nardin ---------- Anderson
First Vice-President, Mrs. L. O. Mauldin -------- Greenville
Second Vice-President, Mrs. Carl B. Epps -------- Sumter
Recording Secretary, Mrs. C. W. Evatt ---------- Greenville
Corresponding Secretary, Mrs. T. R. Gaines ---- Anderson
Treasurer, Mrs. J. W. Bell ---------- Walhalla

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Extension, Mrs. William Boyd ---------- Columbia
Historical, Mrs. H. M. Stuckey ---------- Sumter
Hygeia, Mrs. J. R. Miller ---------- Rock Hill
Legislative, Mrs. M. L. Parler ---------- Wedgefield

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District 1. Mrs. W. W. Wild ---------- North Charleston
District 2. Mrs. Ernest Cooper, ------ State Park, Columbia
District 3.
District 4. Mrs. F. G. James ---------- Geer
District5 .Mrs. A. W. Humphries ---------- Camden
District 6.
District 7. Mrs. D. O. Winter ---------- Sumter
District 8.

It has been some time since the Journal has had any news of the Sumter Medical Auxiliary, therefore I'm sending this brief account of what we are doing.

After the Sims Memorial was completed we felt as if we had very little to work for nevertheless we have continued to hold our meetings each month. For the past few months, at the request of our State President, we have been collecting sketches of the lives of the deceased doctors who practiced in Sumter County. We find this well worthwhile and advise any auxiliary that is not doing this work to begin at once.

The most outstanding thing we have done this year was to give a Christmas tree to about thirty of the less fortunate children of our city. We feel that the Auxiliary is well worthwhile if we do nothing more than bring some happiness to these children once a year, which we hope to do each succeeding Christmas.

Mary Purdy Epps,
(Mrs. Carl B. Epps.)

The Womans Auxiliary to the Greenville County Medical Society of which Mrs. L. O. Mauldin is President gave a most delightful luncheon in the club rooms of the Poinsett Hotel on March 14th for the purpose of getting the members together in a social way. Mrs. W. H. Nardin State President was the guest of honor. She brought a most inspiring message, speaking briefly, concerning what the wife of a Doctor can do to further the interests of the Medical Profession. She also expressed her appreciation for the splendid co-operation which the state body had received from the local organization.

Mrs. Thos. Gaines of Anderson Corresponding Secretary to the State organization was also present.

It being near St. Patrick's Day the Shamrock was used as the keynote for decoration. The speaker's table was especially attractive with a center piece of Callendula while the others were decorated with green bowls of giant daffodils making a most delightful, spring-like setting for the affair.

Mrs. M. P. Gridley, the pioneer club woman of South Carolina gave in an interesting manner the past, present, and future of Hopewell Sanitorium, an institution for tuberculous patients of Greenville County which she has sponsored from its existence.

A delightful program was rendered, consisting of Irish readings by Mrs. Grace P. Durham and a group of favorite Irish duets by Mrs. W. P. Barton and Mrs. C. P. Corn. Two lovely violin solos were also given by Mrs. N. H. Powe—Mrs. J. G. Zemp was the accompaniest.

A number of out of town guests were present as were also two past presidents of the local organization, these being Mrs. Willard Hearin and Mrs. J. W. White.

The committee in charge were Mrs. J. L. Anderson Chairman, assisted by Mesdames H. D. Wolfe, C. P. Corn, and C. B. Earle.

The Auxiliary will have its regular meeting April 7th. At which time Dr. S. E. Lee Supt. of the New Hopewell Sanitorium will be the principal speaker.

Mrs. Clay Evatt,
Rec.-Sect'y. to the Womans Aux. to S. C. M. A.

MEDICINE IN SOVIET RUSSIA

Dr. Ralph A. Reynolds, retired president of the American Medical Association of Vienna, on his return from Soviet Russia told the New York Herald-Tribune that he had visited a large number of clinics in Moscow and Leningrad. Under the socialist system every worker is insured, and when he gets ill the insurance not only pays the full wage during the time of disablement but also the hospital expense.

An institution which has no parallel abroad is the night sanatorium for workers who are in a poor physical condition. These workers, instead of going home when their working hours are over, pass the remainder of the day and the night in the sanatorium. They get a shower and are put to bed for an hour, then do physical culture exercises after which they may occupy themselves as they like until bedtime, which is fixed at an early hour. They are also served a special diet. Only on Sundays are they allowed to leave for their homes. Such a "cure" generally lasts two months. In Moscow there are twenty-four night sanatoria, ten of which are for tuberculosis suspects.

There are 156 day nurseries in Moscow alone, each of them near a big factory. The average attendance is 125 children. To instil the spirit of sovietism at an early age pictures of Lenin as a babe decorate the walls.

The medical service is public. Everybody is entitled to free treatment. About 140 physicians are on duty at a Moscow clinic, and from thirty to forty doctors are detailed to at-home service during the night hours. As private practice is abolished anyone taken ill or meeting with an accident during the night telephones to the nearest clinic and is taken care of.

Village clinics have been distributed so that each clinic serves a population of 15,000. In the more sparsely populated districts this means that many people are more than fifty miles from a doctor. It is difficult to win the uncultured peasant class to modern ideas of hygiene; conditions in the open country are still appalling.

The Russian Government spends money lavishly on modern instruments and other equipment. Funds are always available for research work and propaganda, but the salaries of doctors are small and cannot compare with what a professor or a practitioner can earn in other countries. Physicians of high standing get about a hundred dollars a month and have to be contented with a miserable home of one or three rooms with a kitchen

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Literature on request

Effective Vasodilator

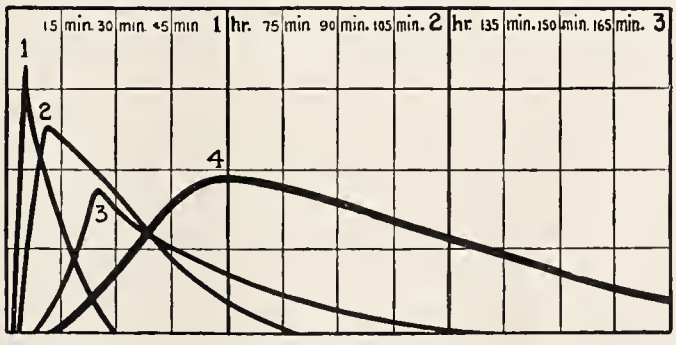
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that is often shared by as many as six families. The idea is that a doctor's home should not be so good as the class of homes given to Communist skilled workers who form the aristocratic class in the Soviet Republic.—Delaware State Md. Jour., Feb., 1930.

The birth registration area of 1922 contained 30 states. By 1928 eleven states had been added to the area and one dropped (South Carolina) making a total of 40 states meeting the requirements in 1928. The same area in 1927 showed an infant mortality rate of 64 per 10,000 as compared with 76 in 1922. The maternal death rate was 12 in 1927 and 15 in 1922. Analysis showed no improvement in the rate from puerperal septicemia, the rate being 23.7 in 1922 and 23.9 in 1927 per 10,000 live births. B. M. Haines, M.D., Effect of Antepartum Care of Mothers, American Jour. Public Health, March 1930.

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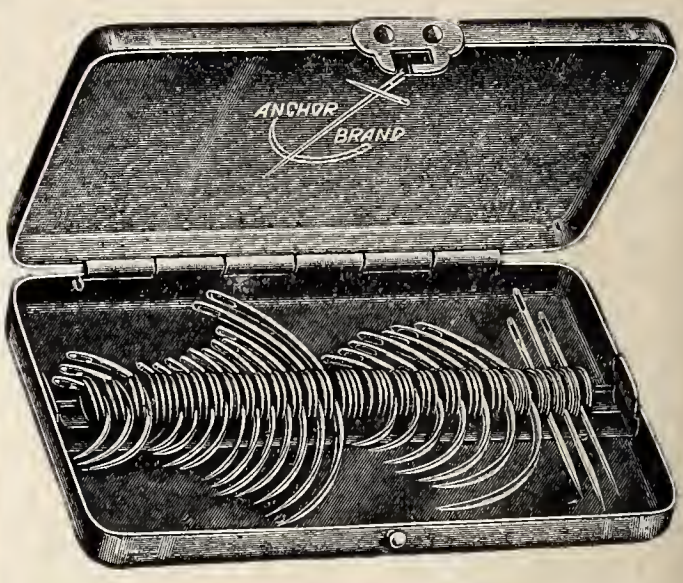
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EDITORIAL

OUR PRESIDENT

Kenneth M. Lynch was born Nov. 27, 1887, the son of William Warner Lynch and Martha Miller Lynch, in Hamilton County, Texas. His boyhood experiences consisted of those common to Texas ranching life of the time. His education was obtained in the public schools and in the University of Texas, from which he was graduated with honors and the degree of Doctor of Medicine in 1910.

Soon afterward he accepted an appointment as Resident Pathologist in the Philadelphia General Hospital. Before this service was completed he received appointment as Instructor in Pathology in the Medical Department of the University of Pennsylvania and as Assistant Pathologist to the Philadelphia General Hospital and the University of Pennsylvania Hospital, under the late Professor Allen J. Smith.

At the reorganization of the Medical College of the State of South Carolina Dr. Lynch was elected Professor of Pathology and came to this State in the summer of 1913 to organize the Department of Pathology in this school.

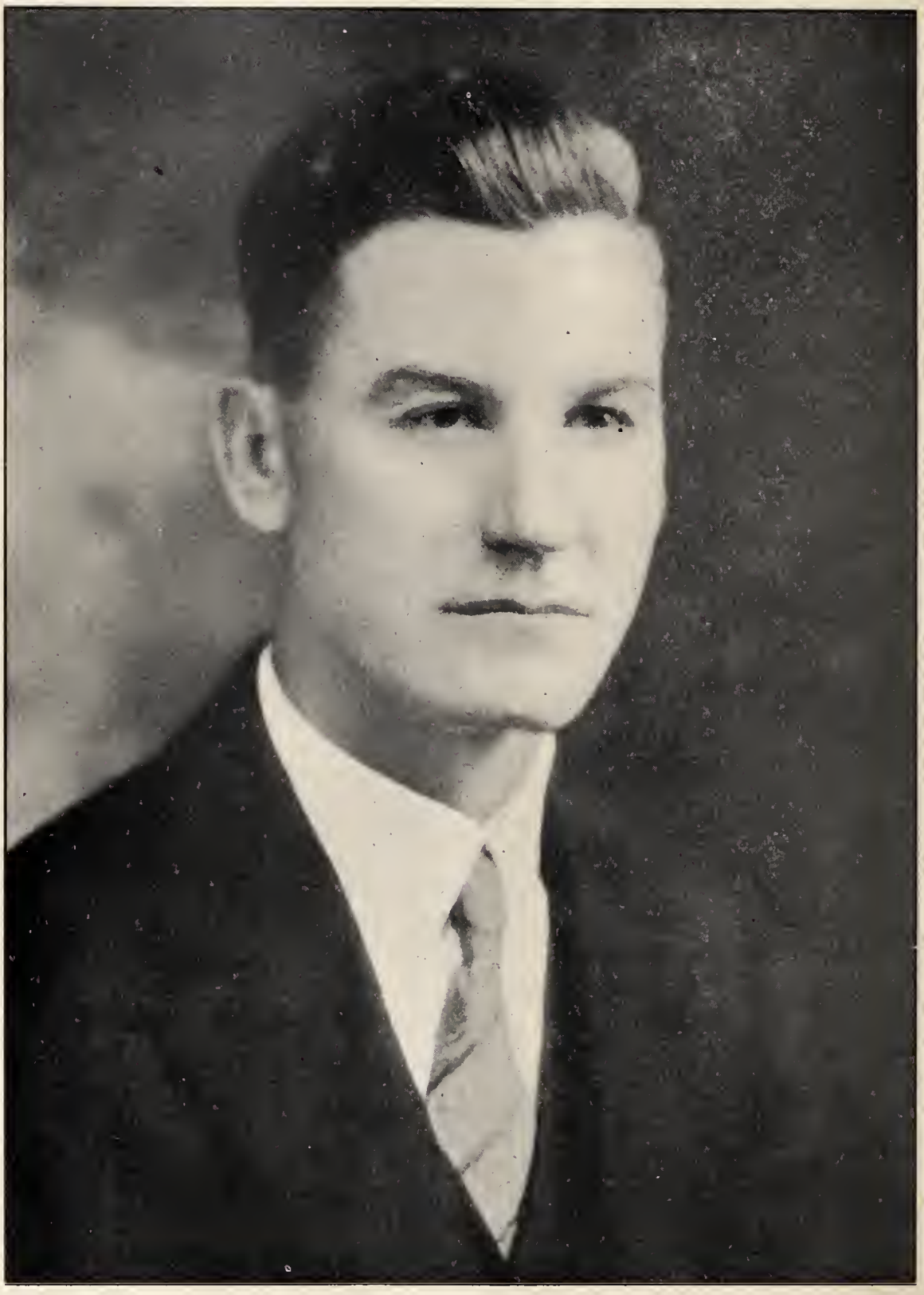
The present School of Nursing of the Medical College is also a product of his conception and promotion, as are the undergraduate medical societies of the College.

In January, 1914, he was married to Miss Juanita Kirk of Amarillo, Texas, from which union there are two children.

At the end of the school year in 1921 he resigned from the College and moved to Dallas, Texas, where he was a member of a private group clinic until December, 1926, when he returned to his former and present position, this made possible by a reorganization of the division of pathology of the Roper Hospital.

During the World War he served on the Staff of a Red Cross Mobile Laboratory Unit, as Secretary and Pathologist of the Medical Advisory Board of the First District, and was commissioned Captain, Medical Corps, U. S. Army, attached as Medical Aide to the Governor of South Carolina in the examination of the Draft in this State.

Interested from the beginning in research, he has published some seventy articles dealing with reports of his work in a variety of subjects in his specialty and particularly in medical protozoology, in a number of medical and scientific periodicals. Resulting from his research in this special field he has been invited to write a book and this is scheduled to be published during the year under the title of "Protozoan Parasitism of the Alimentary Tract." He is credited, among other attainments, with being the first to



KENNETH M. LYNCH

PRESIDENT SOUTH CAROLINA MEDICAL ASSOCIATION

1930-1931

cultivate an intestinal protozoon, with the first indictment of the rat as a carrier of Endamœba histolytica, with the discovery and naming of species of Blastocystis and Enteromonas, with being one of the first to recognize granuloma inguinale in this Country and the first to call attention to its commonness in the South, and with the description of a characteristic pathological state of the intestine in pellagra. Numerous references to various of these articles occur in medical and scientific periodicals and books, and material for special sections of several medical works has been supplied, especially in reference to granuloma inguinale, pellagra, and intestinal protozoa.

He has been a persistent worker in the programs and publications of medical organizations, having read and published one or more papers annually since 1911. In the period from June, 1921, to June, 1922, he read and had accepted for publication twelve papers, and presented three scientific exhibits. He is a member or fellow of fifteen active medical or scientific societies, and has served as collaborator on several editorial staffs. He is now a member of the Editorial Board of the American Journal of Tropical Medicine.

From his research and its presentation before medical societies have come to him the Research Medal of the Southern Medical Association, 1921; the First Award in the Scientific Exhibits of the Southern Medical Association, 1920; the Gold Medal of the Scientific Exhibits of the American Medical Association, 1921; and Honorable Mention in the same Association, 1922.

He has been elected to official position in several scientific organizations as follows: Secretary of the Section on Medicine of the Pan-American Medical Congress, 1915; Secretary of the Southern Conference on Medical Education, 1920; Secretary, Vice Chairman and Chairman of the Section on Pathology, Southern Medical Association, 1923, 1924, 1925, respectively, he serving as the Secretary in organizing this Section; Vice Chairman and Chariman of the Section on Pathology and Physiology, American Medical Association, 1923, 1924, respectively; Member of the Board of Governors of the American College of Physicians, 1925-1927; Councillor of the American Society of Tropical Medicine, 1922-1927; and Vice President of that Society, 1928-1929.

He is now serving as Secretary of the Section on Medical Education of the Southern Medical Association, 1928-1930; as President-Elect of the American Society of Clinical Pathologists, 1929-1931; and as President of the American Society of Tropical Medicine, 1929-1930.

He is a member of the Alpha Mu Pi Omega medical fraternity, of the Alpha Omega Alpha honorary medical fraternity, and of the Omicron Delta Kappa leadership fraternity (honorary from the University of South Carolina chapter.)

Dr. Lynch is recognized as an authority in the development of pathological and general laboratory programs and has been invited on several occasions to serve the Council on Medical Education and Hospitals of the American Medical Association and other organizations in developing this important and growing field in American Medicine. He has been an active proponent of the autopsy and clinico-pathological conference as important measures not only for undergraduate teaching but for the use of county and other medical and hospital staff meetings. He has developed an outstanding service of the order at the Roper Hospital and the Medical College and has served the National medical association as well as this State association and various other smaller medical organizations in the autopsy promotion program.

As an ardent supporter of organized medicine and its objects from the beginning of his medical career he has served in various committees and commissions, from the county medical society to national medical organizations, and has been frequently asked to participate or serve in various deliberations and programs. He has served two separate terms in the House of Delegates of this Association and was its First Vice President several years ago.

Equally interested in medical education, organized medicine, and medical research, he has seen in the development and preservation of close contact and cooperation between the state medical association and the state medical school a very important and reciprocal advantage, and believing that this State and its Medical Association and its Medical College furnish fertile grounds for high cultivation of scientific medical accomplishment, he has remained here to the sacrifice of several more powerful opportunities.

COMMENTS ON THE FLORENCE MEETING

The 82nd annual meeting of the association was a gratifying success in every feature. The hospitality of Florence and the Pee Dee section has not been surpassed at any other meeting. Much credit is due the local committees on arrangements for the admirable way in which the scientific sessions and social affairs were arranged. In spite of the fact that the new hotel did not materialize as expected, the accommodations for the members were adequate and comfortable.

The meeting of the House of Delegates was notable for several important actions. The constitution was amended so that the three vice-presidents previously elected were replaced by the office of president-elect. The proposal to elect a speaker of the house of delegates was not passed. The committee reports were made in summary except the important and carefully executed report of the Committee on Medical Economics. This committee made several significant recommendations in reference to the policy of public health work and hospital charity service. The report was accepted and approved but no definite action was taken to bring about the changes recommended. Each member of the assiocation should read this report when it is published in the Journal. The report of the Council and of the Secretary-editor indicated a growing interest in organized medicine in South Carolina.

The scientific program covered a variety of subjects the majority of which were of interest to both the specialist and the general practitioner. All of the papers were well prepared and well presented. The

address of Dr. William Gerry Morgan, President-elect of the American Medical Association, was of great moment and added much to the program. Because of previously arranged engagements, Dr. Morgan was able to spend only a few hours with us. Dr. Morgan in a brief speech at the Alumni Luncheon expressed his favorable impressions of the meeting particularly the general scope and value of the scientific program.

The symposium on tuberculosis was well presented. The thorough and interestingly presented address of Dr. Park on tuberculosis in infants was a feature of the program.

Malta Fever again received attention in a lively discussion as to its prevalence and importance as a disease in our state and the country at large.

As an innovation at this meeting a daily bulletin of the activities of the session was published. The bulletin was received favorably and appeared to be of value particularly to those who arrived after the meeting was well under way.

The scientific exhibits were not as numerous as we have had. The exhibit of roentgenograms of the soft tissue of the neck by Dr. P. D. Hay, Jr., of Florence, deserves special commendation.

The plan of the committee on arrangements to give more time for social diversion was well carried out. It is doubtful if there has ever been more enjoyable social features at a state meeting.

The alumni dinner given Tuesday at the Y. M. C. A. was well attended. Dr. Gerry Morgan and Dr. Robert Wilson made brief speeches. The President's Reception at the country club was a most enjoyable occasion. Much of the formality of previous years was dismissed and everyone had a fine time. The many beautiful ladies present entered enthusiastically into the spirit of a "leap-year" form of dance and had some of the older doctors stepping around for the first time in twenty or thirty years.

The local Kiwanis Club entertained the members of the association at a luncheon on Thursday. The occasion was informal and was marked by much good fun and fellowship. Dr. Kenneth Lynch, our newly elected president, made a short talk on preventive medicine.

The attendance on the second morning was considerably better than at previous meetings, but by afternoon many began to drift away, leaving only a couple of dozen to hear the final fall of the gavel.

About 400 doctors and public health officials were present. The attendance was excellent. The Woman's Auxiliary was unable to hold a joint meeting with the association this year because of the limited accommodations. We expect to have them with us again next year.

Greenville was selected from several invitations for the 1931 meeting.

COUNCIL OPENS JOURNAL TO ADVERTISEMENTS OF SPECIALISTS

In line with many State Journals the Council decided at the Florence meeting to open the advertising pages of the Journal to the cards of qualified specialists. Our Journal has never taken this step before and if a sufficient number of ads result of this policy the scientific features of the Journal will be enlarged and the profession profit thereby. The rate will be reasonable and it is hoped that a large number will apply for space.

COUNCIL ELECTS ASSISTANT TO SECRETARY EDITOR AND ASSOCIATE EDITORS

At the meeting of the Council held at Florence several important matters were considered, among them a better Journal. It has been the custom to hold elections annually in order that the Associate Editors may not be burdened and opportunity given for filling the places of those who wish to be relieved of this duty. The Department of Surgery during the coming year will be in charge of Dr. Wm. H. Prioleau, Charleston, S. C. The Journal is fortunate in having this able young surgeon to preside over this Department the coming year.

The Department of Public Health will be in charge of Dr. Ben Wyman of Columbia, Director of Rural Sanitation of the State Board of Health. The relationship of the private practitioner and public health agencies have been in the lime light in the recent past to such an extent that the readers of the Journal will appreciate an Editor who is in close contact with the problems.

A few years ago when Dr. R. S. Cathcart of Charleston was President of the State Medical Association, he recommended to the House of Delegates that an Assistant to the Secretary Editor be appointed at some time in the near future in order that some one might become familiar with the details of the office as well as add to the efficiency of the organization. The matter has been under consideration since that time and at the Florence meeting the Council elected Dr. Edgar A. Hines, Jr., of Seneca, to this position. Dr. Hines had already enjoyed considerable experience in contact with the affairs of the Association. He rendered notable assistance at the Florence meeting and edited the new bulletin which for the first time was undertaken there and which appeared to meet with much favor by the members in attendance.

THE PRESIDENT ELECT

For the first time the South Carolina Medical Association will operate under the plan followed by many States of having instead of three Vice Presidents a President Elect. This distinguished honor fell upon the shoulders of Dr. Charles A. Mobley of Orangeburg, a surgeon of rare ability, indefatigable energy, and constructive vision. Dr. Mobley will have a year in which to study the needs of the State Medical Association and organized medicine in South Carolina and when he steps into the Presidency will have the benefit of his observations to guide him in the office.

PRESIDENT'S ADDRESS*

By C. R. May, M. D., Bennettsville, S. C.

The South Carolina Medical Association could have elevated no man to its presidency more appreciative than I am of this high and conspicuous honor. The wisdom of your choice has never been apparent to me, but I have served as best I could and am thankful for the opportunity. The kindly manner in which I have been received on my visits throughout the State has left on me an indelible impression that cannot be effaced.

Much has been said and written by publicists, economists, and those interested in the welfare of our country, in regard to changing conditions existing today. Many interesting facts have been portrayed, for which there is as yet no solutions.

These conditions directly influence the practice of medicine, and more particularly the man who is engaged in general practice: and being one of these, I have great concern that the problem shall be solved in such a way as to improve the present economical status of those of us who are dependent upon general practice for our support.

Medicine has its ideals, its aims and purposes. It is the ideal and desire of every doctor to banish from the face of the earth suffering and sickness, and any man who is not filled with this high ideal is not only unfit to engage in the practice of medicine, but actually cannot and will not so continue, because association with suffering and disease creates a sympathy and kindness of heart in all who are intimately associated with these conditions. Sickness and suffering are universal and have existed from the beginning of time and will continue to the end.

"Without disease and suffering, actual and potential, . . . there could be no such element in human character as sympathy. We sympathize with only those who suffer or are about to suffer. No suffering in life, no place for sympathy in character, no condition to originate it, no condition to exercise it. Sympathy, then, is born in the travail of suffering."

"Sympathy is the finest element in human character. It is the element in character that gives it size. If one life can feel with another life, identify itself with another life, that life has doubled itself; and if one life can feel with, become at one with, three lives, or many lives, that life, to the extent of its interest in others, its identification with others, has multiplied itself. The dimensions of human character are in terms of sympathy.

"Out of sympathy, that emotional quality which we call love is born. Love is one's reflected interest, one's interest mirrored in another soul, and it is only through sympathy, identification of one with another, that one enters into and becomes a part of the life of another. Love is the reflected self.

"Love is that content of character that expresses itself in service. We can only serve through tedious routine and grinding fatigue, day in and day out, the thing we love. Love generates service."

The intimate relationship between physician and patient is primarily one of sympathy, and one of interest, and one of love. The happy state of mind fully repays the doctor for all he does in that his service to those with whom he has professional relations has been a source of infinite pleasure to him.

The doctor who would devote himself, no matter how filled with the ideals of love and sympathy, must support himself and his family, and there must be a readjustment of the existing conditions if the general practitioner is to continue to exist.

There may be an infringement on the rights of the general practitioner by public health agencies. Certainly there is a considerable element of inquiry among a great many doctors over the zealous activities of those engaged in public health. Just whether their activities are carried too far or not, I am not prepared to say, but it is my own idea that the public health worker should confine his

*Read before the South Carolina Medical Association, Florence, S. C., May 7, 1930.

activities entirely to such problems as concern the masses and should have nothing to do with such problems as concern the individual.

Public health is largely education. The public health worker should teach preventive medicine, hygiene and sanitation. The physician in general practice should deal with all the medical matters pertaining to the individual, caring for those who are ill and giving every cooperation to the activities of the health worker by teaching in the home and to all of those with whom he comes in contact, the same measures as taught by the health worker There should and must be no conflict between the two. There is a large field of activity for both, and each could be much more effectively covered when there is a harmonious understanding between the local medical society and the county health unit.

I do not know that free tonsil clinics, free vaccinations, free administrations of toxin-antitoxin, and free clinics generally, detract from the doctor's income, but I do know that I do not know a single doctor who refuses service of any kind to those who are in distress and unable to pay.

For almost all of the ills that exist there is a specialist. The general practitioner would not tell you for one moment that his rights had been infringed on, yet it is a fact that the necessary income from his labors has been enormously cut down while the expenses of living has in no sense been decreased.

There should again be no conflict between the general practitioner and the specialist. The most ethical and cordial understanding should exist between the two at all times. The specialist who disregards the rights of the genera practitioner, and the general practitioner who disregards his patient's interest and refuses to send him to a consultant when necessary who is a specialist, fails in his duty; but when the specialist has rendered such service as is needed he should refer the patient back to the general practitioner with such suggestions or change in diagnosis as may be indicated, and such service and advice as will enable the general practitioner to continue the care of the patient in cooperation with the specialist. If this were always done there would be less cause for misunderstanding and greater appreciation of the rights of both specialist and general practitioner.

There is now and always has been, and always will be, a place for the general practitioner. The possibility of his success more largely depends upon his own initiative than any other factor, and the character of *service* he renders is the deciding influence in the position he occupies in the community. Not only in medicine, but in all lines of business, service plays the most important part, and certainly this rule applies to the practice of medicine.

There is no conflict between the ethics of medicine and the ideals of medicine and the business side of medicine. All doctors are not good business men. Few of them really are.

Compared to other professions, the doctor's income is at best pitiably small. No profession is more exacting—no regularity of hours, subject to call day and night; social life, home life and recreation frequently interrupted, leaving but little time for study. By contrast to other professions, it is one in which love of duty is the high aim of those who begin and those who continue in the practice of medicine.

I know from observation that the general practitioner frequently has poor business methods. He neglects to send bills and is too busy to press collections. This fault is his and no one can help him.

Medical economics, as well as medical ethics, should be taught in our medical schools, and should be a feature of our medical meetings. The principles of the Golden Rule are the code of ethics. The Hippocratic code was written 500 years before Christ; the code of ethics of the American Medical Association was first written in 1847. Both exemplify the teachings of the Golden Rule, which if practiced would ever avoid conflict, criticisms, bitterness, feuds, and all of the things that create animosity and hatred among medical men.

Every young physician should begin his life's work by adhering to the principles of the code of ethics and by adhering closely to good business principles. Good business rules are just as applicable to the doctor as to the banker, stock and bond broker, or the merchant.

Doctors are not pauperized by free clinics, infringement by public health agencies, and specialists, but largely on account of the service rendered and their poor business methods.

There is no reason or justice in demanding that the public pay the merchant, the garage man, or the banker, and allow them to forget the doctor. He should claim and demand the same business consideration. Really his claim is preferred.

During the past year I have made a strenuous effort to increase the interest of the members of this Association in their local medical societies. The doctor who neglects his medical society loses an opportunity, not only to receive, but to give. To be sure, the social contact is worth all the time one loses in attending a medical meeing, but one should recognize the medical society as a post-graduate institution, useful to him, helpful to others in proportion to his interest.

I trust that the interest started will grow and that all eligible men in South Carolina will unite themselves with their local societies and attend the state meetings.

Our Secretary-Editor, Dr. Hines, is an ardent enthusiast for organized medicine and the continuous growth of the South Carolina Medical Association and the growing influence of our Journal under his editorship, are a source of pleasure and inspiration to us. Dr. Hines is the greatest asset of our Association and his untiring devotion and able leadership are an endless pleasure and inspiration to us and we should support him and the Journal in their effort to make the South Carolina Medical Association what it could be.

South Carolina doctors in the past have contributed largely to medical progress. The recent completion and erection of the Sims memorial stands as a testimonial to this great pioneer in gynecology, whom we are glad to honor. Many South Carolinians have done pioneer work of high calibre. The excellent hospitals in South Carolina today are a source of pride and the splendid work being done by our own medical school, graduating young men so well prepared for their life's work, means increased efficiency and service. I have faith and confidence in the future and believe that the man in general practice will again come into his own.

NEWS NOTES

Dr. W. H. Carrigan, of Summerton, is to be the Director of Laboratories at the new hospital in Sumter. Dr. Carrigan has taken several special courses in this line of work and is known all over the State for his outstanding proficiency in this line.

Dr. Kenneth M. Lynch, President of the South Carolina Medical Association, was an invited guest to the meeting of the Medical Association of Georgia at Augusta recently where he delivered an address on Public Health.

Dr. J. R. Young of Anderson was a Fraternal Delegate from the South Carolina Medical Association to the Tennessee State Medical Association at its one hundredth anniversary held in Nashville in April.

The Medical College of the State of South Carolina, cooperating with the State Medical Association, will give a Post Graduate Course in Medicine, Pediatrics, and Obstetrics from July 7 to July 12. A fee of five dollars will be charged for incidental expenses. The course is designed to be preeminently practical for the general practitioner. Those who expect to attend should notify the Dean at an early date.

The Southern Pediatric Seminar will be held at Saluda, N. C. the latter part of July and early in August. A large number of free scholarships which will include both tuition and board will be available preferably for doctors from towns under five thousand and to men over forty. Applications may be made either to the Secretary of the State Medical Society or to Dr. D. L. Smith, Spartanburg.

The A. M. A. meeting will be held in Detroit, June 23rd to 27th. The Secretary of the State Medical Association will be glad to hear of any South Carolina doctors who plan to attend this meeting in order that a convenient party may be arranged for the trip.

Dr. F. H. McLeod of Florence has been honored with a Councilorship in the Southern Medical Association. Dr. McLeod brings to this important office an extensive experience in organized medicine and will therefore be of great service to the members of th Association in South Carolina.

ORIGINAL ARTICLES

REMARKS ON THE HISTORY OF ANESTHESIA*

By J. W. Jervey, Jr., M. D., Greenville, S. C.

There is no need to bore you with dates of this and that, for, to the writer, it appears from a casual perusal that among authors there is no agreement as to the exact point in the whirligig of time that each anesthetic was discovered and first employed. Besides, dates are of relatively little importance in this subject save at one point which will be made clear presently. For your own interest I would invite your attention to the "Proceedings of the Staff of the Mayo Clinic" for December 18, 1929 in which appears an excellent commentary on the history of anesthesia by Dr. C. H. Mayo.

As is well known to all of you, anesthesia is no new thing. The effects of cold and compression have been known almost from the dark ages. "A drug, an antidote of grief and pain, inducing oblivion to all ills," is mentioned by Homer in "The Odyssey." References are made to the anesthetic properties o mandrake and canabis indica by such men as Herodotus, Galen, Lucian, deLuca and others. In "Cymbaline" Shakespeare mplies the use of a narcotic when he causes Cornelius to plan the administration of a drug which, "Will stupify and dull the sense awhile.
No danger in what show of death it makes."
(Prima facie evidence that he was not contemplating prohibited beverages.)

In the last half of the 18th century Priestly discovered nitrous oxide, and some thirty years later Sir Humphrey Davy suggested its use as a general anesthetic, but it was not until eighty-five years ago that its practicability was first demonstrated by Wells, a dentist. Its better effects and safer use when combined with oxygen was called to attention some sixty years ago by Andrews of Chicago.

And now we come to the subject of the recognition and use of ether as an anesthetic. Let me preface my remarks by asserting that there *is* no *question* involved. The dispute is one venerable only because of years, great only in terms of cupidity. Ether was recognized as an anesthetic, and first used surgically as such by Dr. Crawford Long of Athens, Ga., in the spring of 1842, when with its help he removed a wen from the neck of James Venable. He received $2.00 for the operation and Mr. Venable kept the dated receipt which he was afterwards able to produce in settling the contention as to priority in discovery made by the friends of Dr. W. T. Morton of M. G. H. Morton *was* the man who had most to do with the early *promotion* of the use of ether as a surgical anesthetic. Without detracting from the value of his work we may call to mind that he was situated in a large clinic with ample opportunity for observation, authorship and publicity. This was not true of Long. Morton's first use of ether as an anesthetic took place about four and a half years after its introduction by Long. These are the facts substantiated by written documents of eyewitnesses. Whatever controversy still exists must of necessity be technical in nature.

About the middle of the past century chloroform as a general anesthetic was first tried by Sir J. Y. Simpson in England. When he introduced it to alleviate pain in labor it was the cause of a terrific controversy in the church of England, certain of the clergy contending that women should be allowed to suffer in childbirth since God had made it so. However, a few years later he used it for Queen Victoria at the birth of Prince Leopold.

Bennett fifty-five years ago, discovered the local anesthetic effect of cocaine, but not until ten years later did it come into general use following its extensive employment in the field of ophthalmology by Koller. Since that time many and varied have been the substitutes for cocaine, but none seem to have its local anesthetic power to the same degree

*Read before the Greenville Medical Club, Greenville, S. C., March 13, 1930.

when applied to the mucous membranes.

Tales of other anesthetics, local and general, memoirs of hypnotism, sagas of synergism, these, and more are interesting, but did I persist I too might attain an enviable position on the roster of narcotics.

ABSTRACT OF DISCUSSION

J. A. White, M. D., Greenville, S. C.

The people of Boston now generally concede that the priority in the actual discovery of ether as an anesthetic belongs to Dr. Long. Controversy between Wells and Morton over a donation of $100,000.00 to be given by Congress to the discoverer of ether was entirely dropped when Long brought forth positive proof of having given the original ether anesthetic. Long now occupies a place in the Hall of Fame.

Ether was patented by Morton and Jackson who called it Letheon. This name was soon recognized as being unsuitable. Oliver Wendell Holmes was asked to coin a name for the method of putting a patient to sleep with ether. To him we are indebted for the word anesthesia.

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*A STUDY THAT WE MAY HAVE A MORE THOROUGH UNDERSTANDING IN HANDLING THE INJURED

By Sam'l E. Harmon, M. D., Columbia, S. C

The increasing use of machinery of all kinds in all industries and the enormous increase in automobile traffic, coupled with good roads, morons, and speed demons, all combined, have greatly increased the number of accidents and injuries. The results have been so tragical that I feel that we need a better understanding in the handling of the injured, so as to conserve their vitality, to be able to reduce the death and morbidity rate.

I have some well formed ideas about handling the injured somewhat at variance to a large per cent of the medical profession. I am sure that a great many people are killed and a large number maimed for life as a result of poor judgment and improper handling after an injury. I am sure that it is a great mistake to hurriedly, ill-advisedly remove an injured person until the patient is in a condition to be removed and we are prepared to move them. To hurriedly jerk up an injured person, pile them into anything that may be convenient and carry them anywhere at a rapid rate of speed is, to my way of thinking, often a fatal mistake.

The first act of anyone looking after the injured should be to look them over carefully and quickly ascertain if there is any visible hemorrhage. If so, it should be controlled by the best means possible at our command. See if there are any fractures. Give them sufficient morphine hypodermically to relieve their pain, place them at rest in the most comfortable position possible. All this should be carried out wherever we find the patient, if at all practical. See that they are made dry and warm in some way See that the things that are needed are carried to the patient, and not try to transport the person that is injured to the things that are needed until the patient is in a condition to be removed and we have things in proper shape to move them. All bleedings should be controlled; fractures should be fixed—not set, but immobilized so as to relieve pain and minimize shock, so as to conserve the tissues, their vitality and energy. All pain should be relieved. The patient should be wrapped up and made warm and comfortable. If there are wounds, they should be cared for and covered provided we have sterile dressings. If not, leave them open, exposed to the air and sun shine. It is better to leave a wound untouched and exposed, than to handle with unclean hands, unsterile instruments, or be contaminated with unsterile dressings. After all these things have been done and we have everything reasonably comfortable to transport the patient to a better place such as a hospital or home, we are then ready to move them. They should always be transported in a recumbent, comfortable position except in a penetrating punctured or suspected penetrating wound of the abdomen. One should use rare judgment in handling these cases. Oft times it is far better to place such a case in a sitting or semi-sitting posture.

To recapitulate, always be sure that we

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have our patient in the best condition possible and that we have things ready to move them before doing so. As a rule, it is very much more important to take time and prepare things well, than to hurriedly move them. Time is not always the greatest asset. An injured person is generally in better condition an hour or two after, than they are at the time of the injury, provided they have been properly cared for.

When they arrive at their home or a hospital—a good hospital always being preferable—they should be carried direct to a comfortable room and placed into a warm, comfortable bed so that we can give nature time and a chance to re-assert itself. After they have re-acted, it is then time to remove their clothing, dress their wounds temporarily and apply splints when needed.

A compound fracture should never be reduced until after all foreign substance and devitalized tissue have been removed and the tissues have been anticeptisized as perfectly as possible, after which they should be reduced, dressed and immobilized. We do not practice placing any foreign substance into the wounds of a compound fracture for drainage. We are sure that this is a great mistake for the reason that any drainage material would cause pressure necrosis and act as a portal of entrance for further infection. If we are satisfied that we need better drainage, where there are cavities and pockets, we make counter openings at the most dependent portion. All tissue should be handled as gently and little as possible and with sterile instruments. Rough handling and washing tissues tends to lower the natural resistance, causing more destruction and rendering the wound more susceptible to infection. All accidental wounds are potentially infected, but if they are cared for properly, nature will handle things remarkably well.

An injured person should not be rushed to an x-ray room for examination, or an operating room to be operated upon, until they have reacted and have reached a safe stage. In the event they do not react after we have supported them in every way, there isn't any reason for anything further and it is reasonable to suppose that they are not going to react by any treatment. We are not justified in x-raying or operating upon them until they are in proper shape for such an investigation and work. To take an injured person in shock, rush them around from one place to another, have them x-rayed and operated upon, is certainly displaying poor judgment and is not far short of criminal ignorance.

Treat their shock first by rest in the recumbent, most comfortable position. Give them morphine to relieve their pain and produce rest and sleep. Apply heat in every way indicated. Give them water freely unless contraindicated. Water is one of our greatest supporting stimulants. We do not believe very much in so-called drug stimulants. I am convinced that they are often harmful. Of course, control any visible hemorrhage by the easiest and simplest method. I cannot stress this point too strongly.

After they have rested and reacted say six, twelve or twenty-four hours or longer—and in some instances we are justified in waiting several days, depending, of course, upon the individual patient, type and extent of the injury, which requires mature judgment—when we are satisfied that out patient has reacted and has reached a safe stage, then we are justified to proceed to a thorough investigation of all their injuries and do something permanent.

To illustrate. Always place an injured patient in bed unless there is hemorrhage that cannot be controlled by ordinary methods. Give them morphia sufficient for the relief of pain and rest in every way. Place a temporary dressing on all wounds with the least manipulation, after the wounds have been thoroughly saturated with some antiseptic solution, either tincture of iodine, alcohol, acriflavine or mercurochrome solutions.

After all wounds have been dressed and all fractures have been fixed, the patient is allowed to rest, sleep and react. Should they have been injured to the extent of losing any considerable amount of blood, dependent upon the amount and the reaction of the patient, they should be transfused with whole blood. Our method of transfusion is by the multiple syringe, which we think is far superior to any other. We do not transfuse them until we have our hemorrhage under control. For in-

stance, take a case of massive internal hemorrhage from ruptured viscera. We do not transfuse them until we are in a *position to control* the bleeding. Take such a case. Place them gently in bed at absolute rest in every way. Give them morphine. Take their blood pressure and if found below one hundred systolic, leave them alone, make them warm and at rest both mentally and physically. Watch them. Check the blood pressure every three hours. Do not try to do too much. Should they react and their pressure rises to around one hundred, the time has arrived to act.

Suppose, for the sake of discussion, the patient does not react after we have carried out in detail all supportive measures. My experience has been that anything further that we might have done, would produce no better, if as good, results. I am convinced that by following the conservative plan that I have outlined, giving nature a chance, in the long run we will save a larger percentage of our people who have been injured.

While we are waiting for nature to bring about a transformation, we should busy ourselves by collecting together everything possible that we may need, including a proper donor, properly typed for a blood transfusion, provided, in our judgment, the patient's condition requires it. Should the patient need any form of an operation, we should be prepared for that, so that no time is lost. A well advised, well done, easy operation when necessary—do as little as possible to do good work—to be followed by a whole blood transfusion when indicated of five or six hundred c. c.'s of whole blood is par excellence.

To infuse or transfuse a patient that is bleeding until the hemorrhage has been controlled, or we are in a position to control, we think is wrong and should not be practiced. Understand me thoroughly. I am speaking of accidents and injuries, not chronic conditions, causing hemorrhages.

I have practiced these principles for my injured cases for many years and for the most part, they have proven eminently satisfactory.

*CONSERVATIVE GYNECOLOGY

By Dr. J. N. Land.
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This covers a lot of territory—It may mean anything from observation to complete Hysterectomy, and it should as in some cases a complete Hysterectomy would be classed as conservative procedure, so don't think when I say conservative I exclude surgical procedure entirely. I simply wish to emphasize the fact that far too many are subjected to operations when it could possibly be avoided —twenty-five years ago the pendulum of Gynecology swung far to the medical side, it then made a wide sweep and the medical profession discarded medical Gynecology almost entirely. In that time I think irreparable damage was done. Now we seem to have awakened to the fact that there is a middle ground which may be very profitably occupied.

Of course the main thing is diagnosis and classification and with our present facilities that should be easy in most cases. When a patient presents herself the Gynecologist should not presume she has pelvic trouble alone, but should by thorough examination determine her general condition. Look at her general makeup, etc. Most women with pelvic trouble have a lowered resistance and their general health needs care. Diet and bowels should be looked after—tonics in the form of Iron and Arsenic, etc.,given. Proper exercise and sleep are very important. Some of the ductless glands may be at fault causing menstrual disturbances, this likewise must be taken care of—in most of your Gynecological cases a metabolic reading should be taken as this is often of very great help.

In classifying pelvic conditions there are three divisions: operative, non-operative and borderline cases. With but few exceptions we should no longer classify pelvic conditions by the amount of pathology found in the pelvis, but the patient's general condition is considered, paying special attention to the amount of discomfort and incapacity the patient experiences. How many times do we find a fibroma or retroverted uterus or some other condition in the pelvis which gives the patient

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little or no trouble. Why should we operate on such patients? It is far better to place the woman under observation and if she does not develop any incapacity she will go to menopause and then when the pelvic organs undergo atropic changes the condition will be cured. If at any time untoward symptoms arise there will still be plenty of time for necessary operative work. I believe if you find such patients as these they should not be told that they have a tumor or retroversion as the psychic effect will be bad. She will begin to develop symptoms. She should merely be told that you wish to keep her under observation.

I will try and enumerate some of the common conditions met with in Gynecological practice and attempt a brief classification that will enable us to determine whether the case is operative, non-operative or borderline. Pelvis inflamation—acute infection of the urethra, vagina and cervix may be specific or non-specific—smears should be made to differentiate these as I think a great many cases of acute vaginitis are due to colon bacilli and Tri commontas vaginalis instead of neisserian infection. These patients should be put on bland diet plenty of water and rest. Local treatment, alkaline douches. Twice a week vagina should be cleansed with nitrate of silver, mercurochrome or tincture of iodine 3½%. If urination is painful and frequent it can be taken care of by the use of urotropin. Under the above treatment the condition will with the co-operation of the patient be confined to the vagina. If however the condition does extend to the pelvis the patient should be put to bed, ice caps applied to lower abdomen, vaginal irrigations plain hot water several times a day. After the acute stage has passed, you may have left in the pelvis a chronic condition in which the tubes are enlarged, swollen and contains pus. You have now reached the point of division. Operative or conservative treatment. Your operative work is quick and has some advantages, the conservative treatment is rather slow but it has its advantages also. I think the conservative treatment should be given a thorough trial, rest in bed, sitz baths, local vaginal treatments and Diathermy. This method is necessarily long drawn out, but your results in a number of cases are good whereas if you resort to surgery you have in a lot of cases a disturbance of ovarian function, adhesions, etc.

Retroversion of uterus—This condition is usually considered under four classes: 1st. simple retroversion due to disturbances of the normal mechanics, physics or dynamics of the pelvic organs. 2nd. Inflammatory—in which the uterus is displaced by a pus mass and afterward drawn back by adhesions. 3rd. acquired, as results of injury or relaxation consequent upon parturition with subseqnent sub-involution of the uterus and its supporting ligaments, or due to new growths of the uterus and adnexia. 4th. congenital where the woman has no inflammatory condition and has never borne children. Not all retroversions give trouble, in fact a great many never give trouble especially the congenital type. Simple retroversion and acquired retroversion will often respond to conservative treatment. Inflammatory retroversion is usually associated with cellulitis which must be treated before we begin our treatment for retroversion. After the cellulitis has subsided the uterus can be brought forward and held in proper position.

The tendency in the past has been to operate on these cases of simple and acquired retroversions when as a matter of fact very few need operation. Those who do need an operation should wear a properly fitting pessary for several months. If the ligaments fail to involute and keep the uterus forward when the pessary is removed and the patient's symtoms are relieved when the uterus is held forward, then an operation for shortening the round ligaments is indicated. In bringing uterus forward the following procedure is usually successful. Pass the index of the left hand behind cervix—the middle finger in front of the cervix—draw down the anterior wall of the vagina to shorten the depth at the same time pushing upon the fundus—reach down through the abdominal wall with the right hand get behind the fundus and sweep it forward. After it is brought forward it should be maintained in that position by a properly fitting pessary. Pessaries should not be used over six months.

The retroversion arising from new growths

about the uterus or adnexia, or associated with subinvolution or relaxed or lacerated pelvic floor can never be cured except by operation and just as soon as discovered should be operated and no attempt at palliative treatment made.

Fibroyoma of uterus—This is a very important condition on Gynecological classification and is a very common condition. A great majority of negroes beyond the age of 30 presenting themselves for pelvic examinations have fibromyoma—should we operate on account of her fibromyoma? No—Let us stick to our original statement, if it gives no trouble let it alone. Rarely do small fibromyomas unless they are submucous in type give rise to trouble. Remember the important symptoms caused by fibromyoma, menstrual disturbances, pain caused by pressure on surrounding structures, disfigurement of abdomen due to enlargement. If none of these are present keep her under observation and let her alone. You should tell some of her relatives her condition so as not to place yourself in an embarrassing position if they should consult another doctor and he tells her she has a tumor. If the tumor is larger than a grapefruit, operate. If not and your patient is nearing the menopause, X-ray or radium will cure the condition, if the tumor is small causing trouble and the patient under 35 years, operate, endeavoring to save the ovaries.

Carcinoma—We are just groping our way when it comes to treatment of this dread disease. Usually if we can get our cases in the earliest stage surgery is of benefit, but how few get to the Doctor in the early stages. Unfortunately when we get them they are past the period of safe surgical interference. so we only have left to rely upon radium and deep therapy. If we depend on one alone I think we will get better results from radium, but the two go hand in hand. Radium should be used in large doses 3000 to 3600 mg. hours followed by a series of deep therapy treatments.

There are some of the many things that can be done in a conservative way to relieve the conditions you find in your Gynecological cases. Give the pelvic organs a chance before opening the abdomen possibly removing her organs of reporduction and having her damn you forevermore.

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*INTESTINAL OBSTRUCTION

A Review of the Pathological Processes Underlying Certain of the Symptoms

By Walter R. Mead, M. D., Florence, S. C.

Notwithstanding the fact that for the past twenty years the fearfully high death rate from intestinal obstruction has challenged the best surgical minds in the world, no outstanding innovations in treatment have been devised and no appreciable decrease in mortality rate has been accomplished. This is still more puzzling when we stop to consider that the problem involved is one which lends itself admirably to investigation by animal experimentation and biochemical study. The vast amount of work which has been done along these lines has served to clarify the pathogenesis of certain of the symptoms even though it has been devoid of startling results for clinical application. It is the purpose of this paper to correlate some of these pathological processes in intestinal obstruction with the well recognized symptom picture.

Speaking very broadly, there are two groups of symptoms in intestinal obstruction; those arising from the interference with the downward progress of the intestinal contents and those due to the overwhelming toxemia. Among the former we find persistent vomiting with its associated dehydration and other blood changes as well as the familiar obstipation. Included in the group of toxic symptoms are the graver evidences of obstruction, such as subnormal temperature, weak, rapid pulse, and various other shock phenomena. Nearly every case of intestinal obstruction presents a mixture of both types of symptoms, since the number of simple obstruction cases, —i. e., those with occlusion of bowel lumen only and without concomitant interference with the arterial, venous and lymphatic circulation—is so few that it may be regarded as negligible. Such rare obstructions as those due to gall stones, enteroliths and foreign

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bodies might give symptoms due solely to the bowel occlusion, but the vast majority of intestinal obstruction cases is due to volvulus, intussusception, hernia, twists or kinks and adhesion bands, in all of which strangulation of the blood supply gives rise at once to symptoms of the toxic group.

Let us consider first the symptoms associated with interference with normal downward progress of intestinal contents. It is a commonly observed fact that the higher the sight of occlusion, the earlier will vomiting appear. Maury has established a so-called lethal line just below the opening of bile duct and pancreatic duct in duodenum which represents the point where obstruction produces the earliest symptoms and quickest deaths. The act of vomiting is explainable on mechanical grounds—no toxic factor need be hypothecated. The intestinal content comes up simply because it cannot go down. The direct result of persistent vomiting is dehydration. Rowntree has estimated that during 24 hours some 5 to 7 liters of digestive fluids enter the upper digestive tract to be resorbed lower down. This is two or three times the volume of the blood plasma, so that only the resorption of this fluid prevents the body from becoming progressively dehydrated. In any extensive vomiting there is an immense reduction in the water and electrolyte content of the blood; the electrolytes which suffer greatest reduction are the chlorine and sodium ions. In attempting to replace this fluid and electrolyte loss there comes a tremendous drain on the interstitial body fluids resulting in the usual evidences of dehydration—dry skin, shrunken subcutaneous tissue, hollow eyes, and, in infants, recession of fontanels—in short, the Hippocratic facies. If no replacement of fluid and electrolytes occurs from outside sources, the proecss continues to a prompt, fatal termination, often preceded by tetany or other evidences of alkalosis, since the loss of chlorine ions has set free a vast preponderance of sodium ions which then combine with carbon dioxide to form an alkaline sodium bicarbonate molecule. It is a peculiar fact that neither the electrolytes alone nor the water alone will avert this fatal termination. On the contrary, given separately, they tend to hasten the end, but administered together as a 1% to 5% solution of sodium chloride in water, death may be held off, in a simple obstruction, until starvation brings about the end. Hartwell [1] felt that dehydration was the cause of death while Haden and Orr's [2] first work convinced them that the chlorine ion was neutralizing the toxin and, therefore, that the electrolytes were the essential part of the solution. A compromise between these two views is probably more in accord with the facts as we know them now. Certainly, clinical experience offers convincing proof of the efficacy of salt solution given intravenously and subcutaneously in these cases of simple obstruction.

With the development of more exact methods of determining the various chemical and physical properties of blood, certain other changes have been recorded in acute intestinal obstruction, associated with excessive vomiting. There is usually a high non-protein nitrogen of the blood which is due either to concentration of blood plasma with resultant decrease in urinary secretion, or to the pronounced increased in tissue destruction induced by some circulating toxic factor. It is extremely improbable that there is any impairment of the renal filtering mechanism to account for this, since the kidney retains to the end the ability to secrete four or five times the normal amount of urea. Associated with the profound dehydration comes an elevation in the carbon dioxide combining power of the blood plasma so that alkalosis, rather than the more commonly observed acidosis, is the rule. A pronounced increase in blood viscosity almost always appears, impairing the circulation and interfering with the oxygenation of the blood. Furthermore, the sedimentation test shows a definite decrease in the suspension stability of the blood cells, emphasizing the change taking place in the physico-chemical state of the blood.

In brief, the mechanical aspects of intestinal obstruction have far-reaching effects on the human mechanism which by themselves can cause death without the addition of any factor of toxemia. In the order of relative importance the lethal effects of simple obstruction are (1) dehydration; (2) loss of chlorides through vomiting; and (3) starvation.

As noted above, cases of simple non-toxic obstruction are comparatively rare, and yet are not totally unknown. The following history illustrates this type of obstruction: A man of 38 was referred to me because of recurrent attacks of so-called biliousness. He stated that ever since childhood he had been subject to frequent recurrences of extreme nausea, with persistent vomiting of bile and absolute intolerance for all kinds of food and liquids, especially water. The severe symptoms would last about four days, after which there would be a gradual recovery noted first in the increased tolerance for water. For the first few days after an attack he consumes enormous quantities of water, and then rapidly gains weight. A loss of 10 to 15 pounds in weight is the rule during the three or four days of acute symptoms. Pain is never present during an attack although apprehension and extreme nervousness are noted. At the time he consulted me he had just passed through a series of four such attacks during the last of which his weight had dropped from 157 to 144. The hollow eyes, sunken cheeks and grayish pallor were still present when I saw him. His X-ray study showed an enormously dilated stomach, a huge atonic duodenal cap and dilated second and third portions of duodenum. These abnormalities were found, at surgery, to be due to congenital bands of the hepato-duodenal variety, producing partial obstruction of the duodenum. It is undoubtedly a fact that he had complete obstruction during the attacks of so-called biliousness, and that his vomiting and rapid emaciation were the clinical counterparts of dehydration and chloride loss previously described.

The vast majority of cases of intestinal obstruction are complicated by strangulation of the blood and lymph circulation, which immediately brings into the picture a type of toxin which has no equal in medicine from the standpoint of rapid, relentless lethal attack. Some inquiry into the nature and properties of this toxin should be included in any review of the pathogenesis of the symptoms of intestinal obstruction. The location of the toxin, its properties, its probable origin and its method of attack have been the subject of countless animal experiments, many of them giving extremely suggestive results which may be condensed as follows:

Location of the toxin: The toxin is found in the stagnating intestinal contents of a strangulated loop or in the bowel immediately above a single point of obstruction. It has also been demonstrated in the blood of the mesenteric veins after absorption through injured mucosa.

Rapidity of development: The toxin has been isolated from the bowel three hours after simple obstruction.

Properties of the toxin: Despite the most careful isolation and purification of this toxin, even to the extent of securing it as a white powder according to the technique of Ingvaldsen, Whipple, Bauman and Smith, [3] its chemical nature remains a matter of conjecture. Two chief hypotheses are those advanced by G. K. Whipple (4) and by the four workers just mentioned. Whipple believes that the toxin is a proteose derived from incomplete digestion of protein food retained within the strangulated loop. The chief argument against this view is that animals cannot be immunized by repeated sublethal doses of the toxin. Ingvaldsen and his coworkers, after careful chemical analysis of the refined toxin, conclude that it is a nucleoprotein.

Origin of the toxin: As to this point there is absolutely no unanimity of opinion. The possible sources from which it may arise in the intestine are (1) The various intestinal juices—bile, pancreatic secretion, succus entericus, etc. Of these most suspicion attaches to the pancreatic juice, which, when absorbed into the blood stream in active form, produces many of the symptoms of characteristic obstruction. Unfortunately for this theory, the typical symptoms of intestinal obstruction may be produced in a totally depancreatized dog. (2) The intestinal mucosa. Hartwell early suggested that the injured mucosa was the source of the toxin, and his views were put on more secure foundation by the work of Stone, Whipple and Bernheim [5] who elaborated the theory that injured mucosal cells produce a perverted secretion, part of which is liberated in the lumen of the intestine and part of which is sent directly into the blood stream. (3) Bacterial activity. The

belief that the toxins producing the symptoms of intestinal obstruction are products of bacterial action has recently received rather startling support in the work of Williams [6], in England. He was impressed not only by the marked similarity in the systematic manifestations of acute intestinal obstruction and gas gangrene but also by the fact that in an obstructed, strangulated gut there was an enormous overgrowth of the Welch bacillus due no doubt to the excellent anærobic conditions which obtain under these circumstances. Believing that the toxin of the Welch bacillus and intestinal obstruction might be one and the same, he protected a large number of mice by injections of B. Welchii antitoxin and then gave them intraperitoneally some filtrate obtained under anærobic conditions from the intestinle contents of animals and human patients suffering from the intestinal obstruction and generalized peritonitis. The protected animals all lived and many of the unprotected anuimals in a control group died. So convinced was he that he was on the right track that he used B. Welchii antitoxin clinically in a group of 54 cases of acute intestinal obstruction as supplementary treatment to the usual surgical procedures. In this group he had a death rate of 9.3% while in a control group, treated by the same surgical measures but no antitoxin, the death rate was 24.8%. Unfortunately for this hopeful start, confirmation of William's animal experiments has been scant, while refutation has been plentiful. [7] [8][9][10][11][12] It would appear, however, that the wide discrepancy in the death rates of his clinical groups must be explained on more definite ground than mere coincidence. Nevertheless, those who believe that the toxin causing the symptoms of intestinal obstruction arises from bacterial activity will always have difficulty in explaining, first, why a high obstruction is much more fatal despite the comparative freedom from bacteria which the upper intestinal tract enjoys; second, how a bacterial toxin can be elaborated as rapidly as we know the toxin of intestinal obstruction to appear; and third, why, if it is a bacterial toxin, one may inject it intravenously into a well animal, produce almost immediately the symptoms of acute intestinal obstruction and then recover from the intestinal tract of this animal a toxin whose properties are identical with those of the original toxin. (4) The fourth and final possible source of the toxin is partly digested food. There is convincing proof in animal experimentation that this is not the sole source of the toxin, but there is also much to suggest that the type of diet which preceded the obstruction may have much to do in determining the degree of toxicity of the ultimate poisonous substance produced in the occluded gut.

In the foregoing ample evidence has been presented in support of the hypothesis that some toxic substance is elaborated in the obstructed bowel. Numerous observers have recorded that large amounts of the toxin may be taken into the normal small intestine without untoward result. Absorption of the toxin takes place only when there has been injury to the intestinal mucosa and that, of course, occurs whenever there is strangulation. It has been found that after strangulation of a portion of the bowel of an animal, demonstrable lesions in the mucosa appear first at the end of forty-eight hours. Theoretically, therefore, toxemia should begin to be a symptom of paramount importance at that time. I believe this coincides with the common surgical practice of regarding all strangulation cases of forty-eight hours or more duration as having been subjected to a lethal dose of the toxin. Through what anatomical organs or systems this toxin works its lethal effects is not easily demonstrable. Because of this fact some workers have been led to the belief that the cause of death is not toxemia at all but simply a profound shock incidental to the strangulation of a large amount of intestine. Doubtlessly, shock plays an important role in extensive strangulation occlusion but here also there enters the factor of tissue autolysis, a factor of no mean proportions when one considers that a healthy dog cannot survive the introduction of a portion of devitalized intestine from another dog into its abdominal cavity, no matter how small the portion and with every possibility of bacterial contamination excluded. It is highly probable, therefore, that death would eventually ensue in strangulation obstruction simply because there is a portion of devitalized intestinal tissue

present in the abdominal cavity, and that this would occur irrespective of any toxin which might be elaborated by the occluded segment and irrespective of any peritonitis that might develop after its rupture.

In reviewing the whole subject, one is impressed by the deadly character of a number of pathological processes at work in intestinal obstruction—dehydration, progressive loss of blood chlorides, starvation, elaboration of a highly potent toxin, shock and tissue autolysis. Any one of these factors, if permitted to progress without interruption, would inevitably produce death. Only two of them, dehydration and chloride loss, are readily amenable to treatment. The others are progressive in the most relentless manner, beginning at the moment when obstruction occurs, advancing first through a stage when operative intervention may possibly avert a fatality, but rapidly passing into a stage where so much toxin has been absorbed that the most skilled surgery will no longer be of avail. To grasp the opportunity of help in that brief period where surgery can save life must be the goal of every physician and every surgeon who sees an acute abdomen. Nor should there be any lessening of interest in the more theoretical aspects of the problem as presented in the foregoing remarks, since we must expect help from the laboratory in the matter of possibly neutralizing the circulating toxin, directing the work of re-establishing the normal balance of blood electrolytes, and in general upholding the hands of the surgeon on the front line of attack.

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EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M. D., F. A. C. S., CHARLESTON, S. C.

LAWS OF CELL GROWTH

By Charles H. Mayo. M, D., Surgery, Gynecology, and Obstetrics, January, 1930.

Evans and his co-workers have shown the necessity for a fat soluble vitamin *E.* for *reproduction.* Vitamin *B.* has been shown essential for proper lactation, harmones of the *gonads* for *normal development.* The vital processes operate each in its own sphere, influenced, among other things by the internal secretions. It is also known that the nervous system may affect a proper relation of various organs, still the essential controlling mechanism in growth appears to depend on the presence of various vitamins and the products of the various ductless glands.

When the more advanced life of multicellular structures developed, the granules which had controlled the large single cell organisms became assembled into different organs for the general control of the body, making community cell life possible. The secretion of the cells then passed into the intestine to prepare nourishment or was delivered into the blood, by absorption or through lymphatic vessels, to act as fluid nerve harmones. They may be amplified by sympathetic ganglions with nerve connections causing change in the general circulation, the internal organs, or other regions of the body.

The laws of growth, with normal conditions, give an average size for all structures and organs made up of cells.

Growth in the animal organism is controlled by the ductless glands. P. E. Smith, by removal of the pituitary gland in the tadpole showed that metamorphosis was prevented. The tadpoles grew to a very large size, but remained in the tadpole form. The administration of thryoid preparation at any time induced metamorphosis, but the thyroid gland of the hypophysectimized tadpole was in a quiescent state and did not appear to possess the power of activity. The mechanism of metamorphosis involved the thyroid gland and another substance which acted as an excretory material and induced the gland to pour out its secretion, thereby producing metamorphosis. The anterior lobe of the pituitary gland is the source of the excretory substance and thyroid gland can be stimulated by the administration of this substance. But the removal of the pituitary gland resulted in loss of activity of the thyroid gland and prevented metamorphosis.

The administration of extracts of the anterior lobe of the pituitary gland produces gigantism.

Oversecretion of the posterior lobe of the pituitary gland causes delay in the development of sex structures, with a continuation of the infantile period of life, whereas local or general overgrowth of the body is associated with changes in the anterior lobe of the pituitary gland.

Bacteria can be secured from the walls of the uterus containing fibromyomata. In the uterine muscle a clump or colony of such bacteria, the chemical product of which locally resembles that of pregnancy, causes the development of fibromyoma of all muscles within reach of their influence. Epithelial cell growth, as a wart or papilloma, may be induced by clumps of specific bacteria.

Local deposits of special bacteria in a mucous membrane base—as is proved by plant experimentation—may cause polyps or papillomata, as in the mouth, larynx, rectum, bladder, or renal pelvis. (And this may be the basis at the foundation of, the cause of, nasal polypoids, and as conellary a successful treatment of the nasal infection by the Dowling pack or vaccine or otherwise may be the secret of success in the non-operative treatment of nasal polypoids.)

Larger areas within the uterus cause endometritis, or in the bowel typhoid fever exfoliation, as in colitis or polyposis. Undoubtedly, many carcinomata of the mucous

membrane are secondary to local irritation of small growths. The irritation may have varied causes, as the condition is understood today.

The oldest living cells in the world are such cells as those in the giant trees of California, three thousand to thirty-five hundred years old. (Which was after the Flood and before the birth of Abraham.)

In the garden and woods, we see the stimulus of the chemical juice of female insects on leaves, such as on the grape vine when it is stung by phyllozera. The galls on rose stems are tumors. Plant carcinomata of special galls may be created by special chemical injection or by injecting the bacillus tumefaciens into the plant circulation.

SOCIETY REPORTS

RIDGE MEDICAL SOCIETY MEETS

The Ridge Medical Society met April 21, 1930, 7:30 P.M. Dr. S. E. Harmon gave a discourse on oral sepsis and focal infection showing the evils resulting therefrom and the benefits from cleanliness. This interesting subject was discussed by Drs. Young, Asbill, Thackston, Fox and R. H. Timmerman.

Dr. L. P. Thackston made an interesting and instructive talk on pyelitis and discussed it from various angles not only as to the many causes but also to general treatment, etc. This was discussed by Drs. W. P. Timmerman and S. E. Harmon.

Dr. W. T. Gibson reported a case of pregnancy in which there were different opinions as to the line of treatment in terminating same by the different doctors who examined. His report caused a lively discussion as to whteher she should have been delivered by natural route or by Cæsarean operation.

The Secretary requested the members to try to have some suitable clinics for the next meeting.

The following named were elected delegates to the State Medical Association:

Dr. A. R. Nicholson, Edgefield, S. C.

Dr. J. D. Water, Saluda, S. C.

Dr. A. L. Ballinger, Batesburg, S. C.

Supper was served in the Commercial Hotel.

Our guests were Drs. S. E. Harmon and J. H. Young of Columbia, Dr. J. S. Fox of the United States Marine Service (retired) and Dr. L. P. Thackston of Orangeburg.

Since our meeting Mr. John P. Able, father of our Doctor K. L. Able has died. Mr. Able was highly respected and very prominent in this section. He was buried at Leesville where he had lived many years.

Dr. D. S. Keisler is contemplating a trip to Oklahoma.

YORK COUNTY MEDICAL ASSOCIATION

The meeting of the York County Medical Association was called to order by madam President Dunning in Dr. John I. Barron's office well decorated with the native dogwood blossoms. In a very convenient place was the punch bowl well filled with a nearby table arrayed with the necessary dainties that accompany such an occasion. This was all due to the never tiring efforts of the good wives of the local physicians.

After reading the minutes of previous meeting, Dr. R. I. Gibbon of Charlotte, N. C., was asked to take over the meeting. His subject, "The Chronic Abdomen of Elderly Patients," was very ably presented. One of these cases was that of Meckles Diverticula that had caused recurrent attacks of vomiting at intervals over patient's past life. This was corrected by an operation. Dr. Gibbon, then, gave a summary of seven cases of carcinoma upon whom he had operated and that he had been able to follow up from periods of three to seven years. These operations consisted mostly of the three stage operations. These patients have gotten along nicely with no signs of metastasis. Dr. W. B. Ward, in discussing the paper, was favorably impressed with the fact that Dr. Gibbon's patients stood their operations well even in spite of their apparent age handicap.

Dr. Robert Sumner, the next on the program, presented a very thorough review of the chronic gall bladder cases that we have to encounter almost every day. The ones that are not clear cut cases and require all the skill of history taking and laboratory help to diagnosis. He brought out many points by way of differential diagnosis.

Dr. Greenbach, also of Charlotte, was called upon. He gave histories of two very interesting cases. One a very loyal patient who ten days after its annual health examination developed an acute infected gall bladder. To his surprise very much the patient later returned for further medical care. A second case o periodical headache of migraine nature who was perfectly well between attacks who had all physical and laboratory examinations except barium enema wsa told to go for a few weeks rest and return. This oen returned and after proper examination was sent immediately to operating table and found an annular carcinoma of ascending colon. Another case of advanced multiple sclerosis with an infected gall bladder with variously located neuralgias in which the question of operation of not operating was a very puzzling one.

Dr. J. A. Hayne of Columbia was kind enough to come up and discuss the 20,000 unit of diphtheria with our society. York County Medical Society had requested 20,000 units instead 10,000, saying since we use 20,000 units routinely that it would be cheaper on our State Board. Dr. Hayne explained the apportionment that he was given for each kind of treatment. He also enlightened us on other problems that he has to meet. There were no blows exchanged and all left with we hope a better understanding of each other's problems.

Dr. Hayne reported several cases of meningitis cerebrospinal type treated by withdrawing 20 cc of spinal fluid into a sterile container. 10 cc of this was injected back into the spinal canal, 10 cc into glutral muscles. 10 of eleven such treated cases recovered while several in same epidemic died who were treated with reliable antimeningococic sera of different reputable houses. But why?

A York County physician told Dr. Hayne that this was similar to 24 cases of pellagra treated by him in which they had 1 cc of their serum injected at weekly intervals for three doses all getting well of their present manifestations of pellagra. But why?

W. K. McGill, M. D.
Sec.-Treas.

SPARTANBURG COUNTY MEDICAL SOCIETY MEETS

The regular monthly meeting was held March 31st., 1930, in the dining room of the General Hospital at 8 P. M. About 45 members and guests were present.

Dr. J. J. Lindsay introduced Dr. George A. Wheeler, who was our speaker of the evening. Dr. Wheeler said that since 1915 he has spent practically his entire time studying the cause and prevention of pellagra. He and Dr. Goldberger discovered that the disease is due to a deficiency of the vitamin G.

Pellagra was not recognized generally until 1906 and 1907. Pellagra is a disease which is most prevalent during times of financial and economic depression. The worst epidemic was in 1907 following the panic. It caused the largest percentage of deaths in Mississippi in 1915 when cotton was 6 cents a pound. There are many more cases now than there were a few years ago on account of the poor economic conditions on the small farms and cotton mills.

Pellagra is not often found in cities. When a case is seen, it usually occurs in someone with a finicky appetite, someone who is dieting, or someone who is a faddist. A very bad case was seen recently in a woman who would eat only crackers and tea. Another patient who would eat nothing but pineapple with cream and sugar was very severely afflicted.

Pellagra is more often found in rural communities of the South than elsewhere, because the small farmers produce cotton and do not raise enough vegetables, poultry, truck and milk to supply their needs and they do not make sufficient money after selling the cotton to buy these necessities. Pellagra is not often found in the small farms of the North because milk and truck are their chief products. It is not very often found in the slums of the large cities of either the North or the South because fresh vegetables and canned goods containing vitamin G are available. The small farmer in the South should raise more fresh vegetables, poultry, hogs and cows for meat and milk instead of so much cotton.

The foods which are most valuable in preventing pellagra are milk, meat, canned salmon, liver, whole wheat germs, yeast and canned tomatoes. A quart of sweet milk or buttermilk will prevent pellagra. Seven ounces of meat, 6 ounces of salmon, one quart of tomato uice or one-half to one ounce of dried yeast will absolutely prevent pellagra and will make the symptoms disappear when they have already developed. The small cakes of baker's yeast which are sold in drug stores and grocery stores contain very few yeast cells, being made up almost entirely of water and tapioca. Three tablespoons of dried yeast are more effective in preventing pellagra than 25 of these yeast cakes.

Dried milk or powdered milk, cheese, cow peas, carrots, turnips, and eggs are also preventatives when used in large quantities.

Corn, rice, cod liver oil, salt pork, butter, sweet potatoes, onions, lard, vegetable oils and fat meats will absolutely not prevent pellagra.

Canning does not usually destroy the vitamin as canned salmon and canned tomatoes are two of the best preventatives. Most cases of pellagra develop in the spring and early summer before the green vegetables are placed on the market. Many of the old cases who do not eat one of the foods mentioned above, or a combination of them, have a relapse during this time of the year.

Pellagra can be prevented by using foods which are inexpensive. A good diet for the average person is to eat fresh meat three times a week, fish once a week and one fresh vegetable every day.

Dr. Wheeler was asked quite a few questions by the members of the society and visitors. The Secretary read a letter from Dr. Hines urging the adoption of resolutions (similar to those of the Anderson County Medical Society) supporting the Fulmer Bill which authorizes the appropriation of a million dollars to enable the Director of the U. S. Veterans Bureau to provide hospital facilities for the State of South Carolina by the erection of a 300 bed hospital. Dr. Crook moved that the resolution be adopted. The motion was seconded and carried. There being no further business the meeting adjourned.

C. W. Bailey, Pres.
W. M. Sheridan, Sec.-Treas.

ANDERSON COUNTY MEDICAL SOCIETY

The April meeting of the Anderson County Medical Society was held April 9, 1930, at the John C. Calhoun Hotel. The President and Vice-President being late, Dr. E. E. Epting presided over the meeting.

The minutes of the last meeting were read and approved.

The following were elected delegates to the "State

Medical Association" at Florence in May; Drs. E. E. Epting, J. N. Land, and J. B. Latimer. Alternates: Drs. J. R. Young, H. M. Daniel and D. J. Martin.

Dr. Frank Lander had charge of the "Scientific Program"—he spoke very interestingly about the great need of a Tuberculosis Hospital in Anderson County. He stated that one-twelfth of the patients in State Park Sanitorium were from Anderson County.

The Anderson County Tuberculosis Association will have a meeting May 15th, 1930, at the First Baptist Church and Drs. and their wives are invited to be present at this meeting. The main object being a get-together meeting to advocate the building of a Tuberculosis Hospital somewhere in Anderson County.

Following this announcement Dr. Sanders made a motion that we accept the invitation of the T. B. Association to have a joint meeting at the First Baptist Church and for this to take the place of the next meeting of the Anderson County Medical Society—this was seconded and carried.

Dr. Corbett suggested that Dr. Frank Lander read a paper on "Duodenal Ulcer" at the June meeting. This was seconded and carried.

Dr. Frank Lander submitted the following resolutions recommending the erection of T. B. Hospital and they were adopted by the Society.

RESOLVED: That the Anderson County Medical Society has heard with great pleasure of the work of the Anderson County Tuberculosis Association in its efforts to establish a Hospital for Tuberculosis for Anderson County Patients.

That this Society heartily endorses the work of this Association and pledges itself to help in any proper way in the fight against Tuberculosis in this County.

That the Society recognizes and approves of the Tubercular work done by the County Health Unit with the supervision of Dr. E. E. Epting, and expresses it; thanks for this association.

The meeting adjourned for luncheon.

Members present, 22.

D. J. Barton, M. D.
Secretary.

COLUMBIA MEDICAL SOCIETY

Regular meeting of the Columbia Medical Society called to order by the Preisdent, J. Heyward Gibbes, at 8:15 P. M., April 14, 1930.

Minutes of March 10th read and adopted.

First paper on the program by Dr. S. J. Crown, Professor of Otolarngology, Johns Hopkins Medical School was the Diagnosis and Treatment of Para-Nasal Sinus Diseases. The paper was followed by lantern illustrations. The discussion was opened by Drs. B. D. Caughman and P. V. Mikell. Others discussing the subject were Dr. Carpenter of Greenville, Dr. Kibler, Dr. Fishburn and Dr. Jervey of Greenville. Because of shortness of time Dr. Crown did not close the discussion.

The second guest speaker was Dr. J. A. C. Colston, Associate Professor of Urology, Johns Hopkins Medical School on Malignant Diseases of the Urinary Tract. His subject was covered by demonstrations and illustrations shown with photographic plates.

Approximately fifty-seven members present and thirty-five visitors.

Society adjourned at 11:00 P. M.

Respectfully submitted,
William Weston, Jr., Secretary.

SECOND MEETING OF THE COLUMBIA MEDICAL SOCIETY

Second regular monthly meeting called to order by the President, J. Heyward Gibbes, at 8:35 P. M., April 28, 1930.

Dr. Harmon as chairman of Library Committee reported as follows:

Mr. Chairman and members of the Columbia Medical Association:

Your chairman on Medical Library begs leave to report that we believe that it is important that we construct and maintain a Medical Library. That such a need is obvious. We have cast around and studied every possibility from every angle and our activities have crystalized down to one place—The City Library—as the only practical possible solution of the problem. We find that the Board in charge of the City Library is willing, and seemingly anxious, to take over our library, keep it and assist us in future development, though at present they haven't sufficient room. If the Columbia Medical Society will erect a room on a one story part of the present building, making same two story, we feel that this will give us ample room. Said construction will cost about One Thousand ($1,000.00) Dollars.

We therefore recommend that the Columbia Medical Association finance the project, build the proposed room and make a worth while, well regulated, well kept, permanent library possible.

Respectfully submitted,
Samuel E. Harmon
E. W. Barron
Thomas Dotterer
J. Richard Allison

April 28, 1930.

Dr. M. H. Wyman moves that we thank the committee for this report and adopt this suggestion, and proceed with the program as therein outlined. Motion discussed by Drs. Baggott, Madden, Allison, N. B. Heyward, Harmon, Rice, McIntosh and Routh. Motion passed.

The president appoints the same committee (library committee) with power to act. The names are Samuel E. Harmon, Chairman, E. W. Barron, Thomas D. Dotterer, J. Richard Allison and E. Z. Zemp.

Dr. John B. Setzler was elected as a regular member of the Columbia Medical Society having transferred from the Dillon County Medical Society.

The application of Dr. Miles Whitfield Cheatam as a transfer from McCormick County was accepted and will be voted on at the next regular business session.

Dr. M. H. Wyman moves that the delegates from the Columbia Medical Society to S. C. Medical As-

sociation invite the S. C. Medical Association to meet in Columbia in 1931. Motion seconded and passed.

The clinical pathological conference opened by Dr. N. B. Heyward ruling out different causes by a blackboard talk. Several members entered into the discussion. Dr. Plowden closed the C. P. A.

Dr. J. Heyward Gibbes announced that the President's reception for the Columbia Medical Society members will be held at his home on Friday, May 16th, at 8 P. M. All members of the Columbia Medical Society are cordially invited. Dr. Robert Wilson of Charleston will be the guest speaker and will talk on some phase of Medical History of South Carolina.

Thirty-two members were present. Society adjourned at 10:10 P. M.

Respectfully submitted,
William Weston, Jr., M. D.
Sec.

SPECIAL CALL MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY HELD IN THE GRILL, WOODSIDE BUILDING, MARCH 28th, 1930

The meeting was in the form of a banquet held in honor of Dr. Paul D. White of Boston, Mass. The invocation was given by Dr. Carpenter.

After supper, the President, Dr. Guess, introduced Dr. Paul D. White who read a splendid paper on Heart Disease. Dr. White mentioned that the prevention of heart disease a hundred years ago was considered very futile.

Heart disease is the leading cause of death of all ages now and much of it is preventable.

Irritable or soldier's heart was given much attention during the last war, and was also prevalent in other wars, but other diseases of a communicable nature, such as typhoid drew all of the attention and soldier's heart passed unnoticed. Dr. White then discussed the expectancy of life, mentioned the fact that it has been materially increased during the past twenty years until it has reached 58 years. The expectancy of life in India and other less civilized countries is around 23 years.

Arrhythmias and enlargement of the heart were recognized fifty years ago but were not accounted for until rather recently. The ætiological classification of heart diseases is very important, before they can be prevented. Some diseases of the heart cannot, as yet, be prevented, but still we must work on.

Dr. White then mentioned the following ætiological factors of heart disease:

1. Congenital. 2. Rheumatic. 3. Malignant endocarditis. 4. Syphilistic. 5. Infectious diseases. 6. Nervous heart. 7. Thyroid. 8. Hypertensive. 9. Lung diseases. 10. Coronary sclerosis.

In discussing these factors, Dr. White stated that nothing could be done in regards to Congenital Heart Disease.

Rheumatic Heart Disease can be controlled very largely by the prevention as far as possible of chorea, rheumatic fever, and the elimination of foci of infection. Rheumatic Heart Disease is very common in New England, and the exact bacterial cause is not known. A vaccine or a serum may be developed later on which will be of value. Dr. White stated that in his recent trip to Jamaica, a physician informed him that in his long experience among the natives, he had only seen one case of angina and one of chorea. Rheumatic Heart Disease is most common in crowded communities, such as tenements, etc., and often several cases are noticed in the same family. Rheumatic fever frequently occurs in epidemic form. It may be largely lessened by improving the living conditions of the poor in the North; contact of other children with the affected should be avoided. Tolsillectomy is necessary in those patients who have shown rheumatic tendencies, as malignant endocarditis is likely to follow Rheumatic Heart Disease. Treatment consists of rest in bed, the salicylates are valuable in the acute stages of the fever, but later may suppress the immune bodies that have developed.

Malignant endocarditis was then discussed at length, and was classified as a. Acute and b. Sub-Acute. The causative bacteria are the staphylococcus, streptococcus, pneumococcus, and gonococcus. The sub-acute classification is given to all cases of more than 3 months duration. The heart infection is usually secondary and terminal. The streptococcus tends to attack damaged hearts. Removal of a focus of infection is now known to be no cure for a malignant endocarditis.

Syphilitic Heart Disease is on the decline in some parts of the world where syphilis is recognized early. This form of heart disease is very dangerous owing to the damage done to the aorta and its valves. When the aortic valves are involved, the disease is very far advanced. Fortunately, however, this serious affection is only one-half as frequent as it was twenty years ago. This one is of the most important reasons why syphilis should be recogniezd early and treated faithfully.

Diphtheritic Heart Disease due to the toxins of the bacillus diphtheriæ is not now so frequent as it once was owing to the more general and widespread use of the antitoxin. Dr. White then stated that tuberculosis causes a pericarditis.

Nervous, or Irritable Heart was mentioned as being aggravated by undue mental and physical strain. It has also been called "Soldier's Heart," and is characterized by the effort syndrome, of which the symptoms are palpitation, heartache, dyspnœa, etc. The prevention of this type of heart disease is obvious and it is best treated by the proper regulation of the patient's life and habits.

Thyroid Heart Disease is not very common but is appreciable. In New England it amounts to 3% of the total of heart disease. It is due to hyperthyroidism. It is controlled by early diagnosis and treatment. Rest, and drugs are of value, but are inadequate; surgery should be resorted to. Dr. White mentioned that the heart's action is deficient in myxœdema.

Hypertensive Cardio-Vascular Disease—its cause or causes is still a mystery. The elevated blood pressure is a great strain on the heart, and patients cannot stand it for an indefinite number of years. Over-eating

should be discouraged and the taking of more physical exercise should be encouraged.

The heart's action is also embarrassed in certain lung diseases, such as emphysema. There is enlargement and failure of the right ventricle. Any pulmonary obstruction may give rise to this pathology of the right heart.

Coronary arteriosclerosis is usually assigned to senility, although it may be found in young individuals in certain families. Women are rarely affected when young. This type of heart disease is thought to be due directly to the mental strain of life, and the nervous element is very important. The mechanism of angina pectoris is not known. Resuscitation from attacks has been known. The habits of the individual should be regulated, worry and mental strain should be avoided. Coronary thrombosis may occur, although it does not necessarily mean the death of the patient. This form of heart disease is showing a tendency to increase. Discussed by Drs. D. Lesesne Smith, Evatt, W. S. Fewell, Frank Lander, Wilkinson, Carpenter, Furman; closed by Dr. White.

Communications from the following were read: one from Congressman J. J. McSwain relative to the establishment of a U. S. Veterans Hospital in this State, and one from U. S. Senator E. D. Smith relative to his proposed opposition to changes in the present Harrison Narcotic Act.

The application of Dr. L. W. Wood of Slater, S. C., for membership in the Society was read by the Secretary. It was moved, seconded and unanimously carried that Dr. Wood be elected a member.

There being no further business, the meeting adjourned.

Irving S. Barksdale, M. D.
Secretary.

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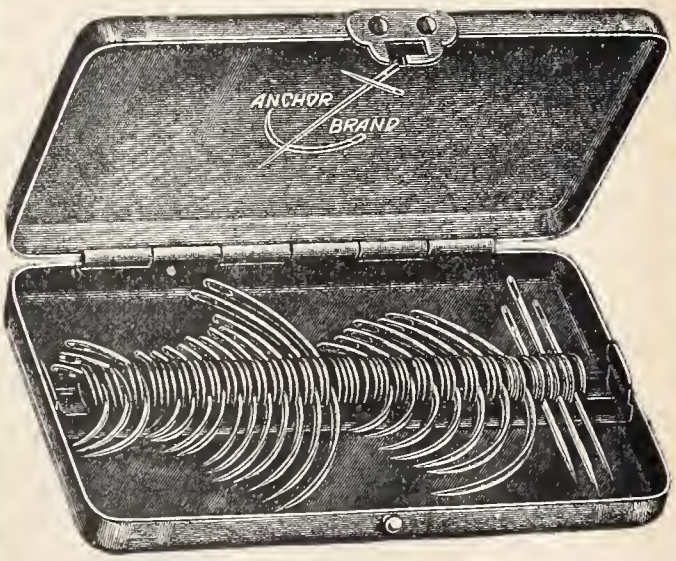
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EDITORIAL

GROUP INSURANCE FOR MEMBERS OF THE STATE MEDICAL ASSOCIATION

The Council at the Florence meeting, May 8, 1930, investigated a proposition by the Pioneer Life Insurance Company of Greenville S. C., and after due consideration subsequently agreed to recommend this form of insurance for the members of the South Carolina Medical Association. Representatives of the Pioneer Life Insurance Company will interview the members both by letter and by field agents and explain the benefits of the policies. A large number of organizations in South Carolina which includes the South Carolina Teachers Association have entered into a contract with this Company along the lines outlined above. We believe this to be a decidedly progressive step the Council has taken and feel confident that this enterprise will strengthen our organization for only physicians who are in good standing are eligible for this insurance. We bespeak a courteous hearing of the field agents of the Company when the plan is presented by them.

POST GRADUATE COURSE AT THE MEDICAL COLLEGE, JULY 7 TO 12

Sometime ago the Secretary of the State Medical Association at the request of the Dean of the Medical College sent out a questionnaire to the physicians of South Carolina in an effort to learn just what interest there really is in post graduate education at the present time. Approximately one hundred and fifty physicians responded. Of this

number about seventy five stated that they would attend the course if offered at a convenient season. This large number greatly encouraged the faculty of the Medical School and it was decided to put the course on again this summer. There are certain significant changes. Past experience seemed to indicate that the majority of practitioners were interested in medicine, pediatrics, obstetrics and clinico-pathological conferences. These subjects will therefore receive major attention. Past experience also seemed to show that the majority of medical men could and would leave their homes in considerable numbers and spend one whole week at the college but not many would stay over for the full two weeks. It seemed wise therefore to concentrate on the above subjects and limit the time to one week. Now as we see it, it is the duty of the members of the State Medical Association to lend their full support to the Post Graduate Course. Let us make our plans now to be in Charleston promptly when the doors open. The full professorial staff will be our teachers. This is an important point. In many summer courses elsewhere throughout the world the heads of Departments are away on vacation. The Dean informs us this will not be the case in our State. The Association is keenly interested in adopting as a permanent policy some form of annual post graduate instruction that will meet the need especially, of the general practitioners.

FREE POST GRADUATE SCHOLARSHIPS AT THE PEDIATRIC SEMINAR

We are advised that South Carolina is entitled to several free scholarships which includes both board and tuition at the Pediatric Seminar, Saluda, N. C., July 28 to August 9. This is a great opportunity for general practitioners from the smaller towns and who have been in practice a few years. Applications should be made at once to the Journal or to Dr. D. L. Smith, Registrar, Saluda, N. C.

PUBLIC HEALTH ACTIVITIES TO BE MORE DIRECTLY UNDER THE CARE OF COUNTY SOCIETIES

The Florence meeting was notable for the report of the Committee on Medical Economics and its recommendations which were adopted by the House of Delegates. To become effective the County Societies must act immediately. It is hoped that there will be an enthusiastic effort to carry out the suggestions. We publish herewith the entire report:

SCHEDULE OF CLINICS

	Monday	Tuesday	Wednesday
A. M. 9-10	Pediatrics Dr. M. W. Beach Infectious Diarrhea	Pediatrics Dr. M. W. Beach Malignant Malaria	Pediatrics Dr. W. M. Rhett Scurvey
A. M. 10-12	Medicine Dr. Robert Wilson Goitre	Medicine Dr. W. A. Smith Tuberculosis	Medicine Dr. J. H. Cannon Cardio-vascular Renal Disease
M. 12-1	Obstetrics Dr. L. A. Wilson Toxemias	Obstetrics Dr. H. W. de Saussure Dystocia	Obstetrics Dr. R. L. McCrady Eclampsia
P. M. 4-5	Pathological Conference	Pathological Conference	Pathological Conference
P. M. 5-6	Round Table Discussion	Round Table Discussion	Round Table Discussion

	Thursday	Friday	Saturday
	Pediatrics	Pediatrics	Pediatrics
A. M.	Dr. W. M. Rhett	Dr. J. I. Waring	Dr. J. I. Waring
9-10	Rickets	Vitamin B	Syphilis
		Feeding	Congenital
	Medicine	Medicine	Medicine
A. M.	Dr. J. A. Finger	Dr. O. B. Chamberlain	Dr. Robert Wilson
10-12	Diabetes	Neurological Clinic	Cancer Clinic
M.	Obstetrics	Obstetrics	Obstetrics
12-1	Dr. L. A. Wilson	Dr. H. W. de Saussure	Dr. R. L. McCrady
	Antepartum Hemorrhage	Prenatal Care	Dystocia
P. M.	Pathological	Pathological	Pathological
4-5	Conference	Conference	Conference
P. M.	Round Table	Round Table	Round Table
5-6	Discussion	Discussion	Discussion

"AIR DOCTORS"—The Development of Medical Aviation

The air ambulance with silent engines which, it was announced during the week, is being made for use in remote parts of the Empire, will probably be the beginning of a new and interesting Empire service.

France has already formed a branch of what is called medical aviation for her African colonies, and during 1928, the year of its formation, it was responsible for the transport of 239 patients from outlandish parts of Algeria, Morocco, and the Levant to centers where they could be properly treated. The planes are Farmans, one type of which carries, in addition to doctor and nurse, six patients on stretchers, and the other type twelve persons sitting or ten on stretchers. The United States Department of Commerce has also secured air ambulances for use in the Great Lakes district, where sick persons in isolated settlements are often carried with speed to hospital or clinic. The planes in use here are fitted with wheeled cots, hot and cold running water, electric fans, etc.

It is for grappling quickly with an epidemic, however, that medical aviation is expected to prove itself most useful. Of this there was an illustration in Canada last year. Diphtheria broke out in a trading post along the banks of the Peace River, Alberta, and the only doctor available, sent for by dog sled from Fort Vermilion, soon found himself handicapped by lack of serum. He sent word of his need, by the means of a dog team, to the nearest town, and within a few hours two airmen were soaring northward with supplies of serum that saved many lives—though this was an ordinary open plane, and not a medical one.

Organized medical aviation was first employed in Siam, a country in which epidemics have hitherto spread with dread rapidity. In the winter of 1927 an epidemic broke out in the Ubol province, and, with the quick exhaustion of medicines, cases multiplied to an alarming extent. The Governor telegraphed to Bangkok, and the health director there telephoned to the air commandant at Don Muang, a special train with doctors and nurses, being prepared at the same time to leave for the flying ground.

Within a few hours of taking-off in six aeroplanes the doctors and nurses were coping successfully with the epidemic, and the King was so impressed that he headed a public subscription to buy a number of planes, filled with medical equipment and ready to go at a moment's notice to any part of the country.

Used in cooperation with wireless, with which the world's lonely outposts are being gradually equipped, medical aviation is probably destined to nip in the bud many a terrible plague.—The Observer.

ORIGINAL ARTICLES

*SYPHILIS AS A FACTOR IN INFANT MORTALITY IN SOUTH CAROLINA

By J. I. Waring, M. D., Charleston, S. C.

That Syphilis plays an important part in maintaining a high infant mortality is a well accepted fact. In South Carolina we are afflicted with both a high mortality and a large amount of syphilis, yet our vital statistics would lead to the impression that the disease is a very minor factor in the causation of our entirely too numerous deaths. It is the purpose of this paper to suggest that syphilis is one of the more harmful influences which keep our state's mortality at the high level that it maintains, and to call attention to what seems to be a rather neglected field for improvement of our infant death rate.

It is recognized that our rate for white population is reasonably good, while the relatively large number of deaths among the colored people bring the total rate up to an unduly high figure. Knowing the great prevalence of syphilis among the negroes, as compared with even its frequent occurrence among the whites, we must recognize its influence on our large number of deaths. Of all the negroes who enter Roper Hospital in Charleston, about 50% show evidence of syphilis in the form of a positive Wassermann reaction, while 15% of the whites show the same. These are higher figures than apply to some other parts of the state, but probably not far from the true figure for our state's average.

When syphilis is so common with us we can well appreciate Osler's statement that "Syphilis is a more common disease than tuberculosis, that it is responsible, in his opinion, for from one-sixth to one-fifth of the infant deaths in England, and that it is by far the most common cause of death during the first month of life." Perhaps even a broader statement might be made in regard to South Carolina, even tho' last year's report ascribes less than one-fiftieth of our infant deaths to syphilis. Knowing that we have syphilis in abundance, we are forced to suppose that in regard to infant deaths it remains either unrecognized, or untreated, or through too much familiarity, ignored, both in the pregnant woman and in the infant, and that much of our mortality rests upon these faults.

In the first case, syphilis frequently remains unrecognized in pregnancy because no effort is made to find it. Prenatal care usually includes urinalyses, blood pressure readings, and other measures aimed largely at forestalling the development of eclampsia, a disease which is far less frequent than syphilis, and which is of relatively little importance in respect to the survival of the live-born child. In very many cases and places no routine search is made for either clinical or serologic signs of syphilis, which is present even on a very conservative estimate in 10% of the general population, and is of great importance in the welfare of both mother and child.

Syphilis in the child, even when its manifestations are frank, often is not recognized. That it is very common here is shown by the fact that about 2% of the white children of all ages, and about 23% of the colored children admitted to the pediatric wards in Roper Hospital show positive Wassermann tests. While these are charity hospital figures, nevertheless they represent the findings in the class of people who contribute most to our death lists, and do not include many infants who succumb in the neonatal period. In Charleston, at least, less than half of the death certificates of proved syphilitic children who die of various causes show any mention of syphilis, whereas in many instances Syphilis, no doubt, is fundamentally more responsible for the death than is the terminal illness. More important than this is the fact

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*Read before the S. C. Public Health Association Florence, S. C. May 6, 1930.

that a very considerable part of our syphilitic mortality masquerades under the vague and misleading terms of prematurity, congenital debility, and inanition. "Syphilis is looked upon as an outstanding cause of premature termination of pregnancy" says Bolt. In that neonatal period which has been least successfully improved by organized efforts for the saving of life, prematurity and congenital debility account for almost a fifth of all deaths, and there is no doubt that in very many cases syphilis stands back of these terms. Certainly such a feeling is borne out by some small figures obtained in Charleston. Four out of five colored prematures recently born in Roper Hospital were syphilitic. One of two white prematures was syphilitic. Nine out of fourteen colored mothers whose children's deaths were reported to the Health Department as due to prematurity or congenital debility showed positive Wassermann tests. Supposing that a conclusion could be drawn by applying these figures to our state's mortality, we would have many hundreds of deaths now ascribed to prematurity and debility more correctly attributed to syphilis, and we would be in far better position to face and handle the problem.

The treatment of syphilis in the pregnant woman offers a great opportunity for the reduction of infant mortality. The familiar figures of Williams of Johns Hopkins have shown this clearly. With adequate treatment, begun early in pregnancy, over ninety percent of the offspring are born in good condition. On the other hand, 70% of the pregnancies of untreated syphilitic women end in tragedy.

There is apparently a common feeling that the congenital syphilitic should be left to die in such peace as is possible under the circumstances, or given a few grains of mercury to clear up his immediate symptoms. Granting that the treatment of these cases is "painful, expensive, difficult, distressing to parent, child, and physician," as someone has said (White and Veeder), and that many cases are rather hopeless from the start, there are nevertheless a considerable number of these children who respond well to even a little systemic treatment. Provided their nutrition is cared for, and treatment is given conscientiously, very good results can be expected.

Many avenues leading to the reduction of our infant mortality are open to us, and t would appear that the one marked "Syphilis" offers more definite reward than most of the others. If we are to curtail the occurrence of congenital syphilis, of prematurity, and of so-called congenital debility, we must focus attention on the prevention, recognition, and treatment of syphilis in the general population, especially in the pregnant woman. More attention to this disease in the prenatal period, and a more optimistic attitude toward the result of treatment in the congenital syphilitic would seem to be imperative. Perhaps if we would become more "Syphilis-minded," so to speak, think of more Wassermann tests, and search for evidence of the disease in parents and infants we might make an appreciable reduction in our state's mortality rate.

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*DIAGNOSIS AND TREATMENT OF SINUS INFECTION

By Pinckney V. Mikell, M. D., F. A. C. S.

Discussing this great problem in a fifteen minute essay it is only possible to touch upon the essential points. So my text will be the one taken by a colored "local" preacher, "From Generation to Revolution." Sinus infection is much more prevalent than recognized and if this modest paper is of any aid in recognizing the possibility of sinus in-volve ment in every day work I will be more than repaid for this effort.

Sinus involvement is of importance to every practitioner of medicine: Oto-Laryngologist, Occulist, Internist, Pediatrician, Obstetrician, Orthopedist, Laboratory Man and last but not least the General Practitioner; as it causes many diseases such as Asthma, Nephritis, Heart Disease, Otitis Media, Mastoiditis, Bronchitis, persistent cough and Anorexia in children and others.

These infections may be limited to one sinus or there may be a pan-sinusitis, causing minor systemic effects or even terminate

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*Read before the South Carolina Medical Association, Florence, S. C., May 7, 1930.

life itself. The general causes are exposure to cold, over work, worry, over play, or any factor lowering bodily resistance; lack of proper vitamines as brought out by Dr. Wm Weston and also by Dr. J. A. Stuckey; toxemia, pus foci from tonsils, tuberculosis, syphilis, infected teeth and other causes.

LOCAL—neglected adenoids in children, tight and narrow nasal passages causing lack of free drainage and ventilation, enlarged turbinates from repeated colds and other infections, infected teeth, improper ventilated homes, thumb sucking and "pacifiers" in children as well as Vincents Angina.

Acute infections of the sinuses usually follow, or are associated with influenza, which heads the list of causative factors, acute colds, measles, scarlet fever and other diseases of like nature. Tooth infection—causing antral involvement by extension, swimming and diving in fresh water and sometimes surf bathing.

SYMPTOMS: Are those of pain usually over the fifth nerve area. Pain is usually over brow when frontals are involved and over cheek bones in antrum infections, (a tooth will sometimes seem longer than others in antrum infections); over occipital area when sphenoids are involved. There is usually some odor, which at times is markedly offensive—even to the patient himself. Blockage of nares with mouth breathing and usually some discharge from nose and into the back of the throat. There is also present at times marked malaise and fever.

DIAGNOSIS: (1). There is a history of some nasal infection or influenza, with coryza more or less marked—dripping in post nasal space—malaise and some local pain, etc., blockage of nasal passages and there is at times some odor and fever. (2). Inspection with speculum, before and after shrinkage of nasal passages will show pus in nasal fossæ, as will inspection of pharynx, with post nasal mirror. (3). Nasopharyngscope to inspect the ostea of sinuses and mucous membrane. (4). Transillumination, in a dark room with every particle of light excluded is quite a reliable test for antral and frontal involvement; showing a shadow in sinus area involved. (5). X-Ray a very reliable aid but not infallible—it being a greater help in frontal and ethmoid infection. (6). Irrigation in suspected antrum involvement, to my mind, is the most reliable of all and if carried out through a two way cannula and the washings cultured. The diagnosis is sometimes extremely difficult, making it hard to decide upon the best method of treatment. Fortunately, however, the average case can be diagnosed by inspection, odor, Transillumination, X-Ray, plus the history. These are available to any physician.

SOME COMPLICATIONS: Retrobulbar, Neuritis, Meningitis, Mastoiditis and Brain Abscess. Treatment: Preventive: Examination of all children for infected tonsils and adenoids and the condition of interior of nose, elimination of all foci of infection. Education of our clientele that every acute cold is a potential sinusitis, especially in children, which means every child with infection of upper respiratory tract should be put to bed upon a restricted diet. Dr. L. W. Dean says the incidence of sinus infection is as great in children as in adults. At the onset, after being put to bed, a cathartic such as calomel should be given, this causing elimination of toxins; plenty of fluids; Codeine and Salicylates for discomfort and fever, steam inhalations, hot applications locally. The only local treatment necessary during first two days is Ephedrin Solution or Ephedrin combined with bland oil dropped in the nostrils every few hours. After pus discharge developes, the membranes should be kept shrunk down every three hours with Ephedrin or Cocaine in oil. After waiting until nostril is open, real warm saline irrigation should be used carefully, followed by warm Argyrol or Neo-Silvol packs or as a spray combined with suction. This should be kept up daily until complete recovery.

CHRONIC: Due to the same causative factors as acute, but is usually dependent also upon "bad anatomical noses." Faulkner says: "Chronic sinus conditions can produce as much disability as a limited Tuberculosis lesion in a lung and many a person has gone through life as a chronic invalid, labeled a Neurasthenic or Hypochrondriac from an undiscovered pus focus in the nasal sinuses. It is quite common to find the condition in several members of the same family who are

so affected and nearly all show the same manifestations."

TREATMENT: The non-obstructive cases are relieved by medical treatment, over a period of many weeks such as already outlined and general supportive treatment, with proper diet.

A submucous resection of the septum is often necessary to establish drainage and ventilation and cure the patient or removal of infected tonsils and adenoids, which so often in children clear up middle ear trouble as well as sinusitis. Partial Turbinectomy will often clear up an Ethmoid infection. Repeated irrigations or even window resection of antrum and extraction of infected teeth is sometimes necessary. Radical operations are sometimes necessary on one or all of the sinuses but this cannot be discussed fully in this paper.

CONCLUSION:

(1) Sinus infections are quite prevalent and quite often over looked.

(2) May be menace to health and even life of individual.

(3) Diagnosis comparatively easily made from history, Inspection, Transillumination, X-Ray, etc.

(4) Can be eradicated in vast majority of cases by early, persistent treatment and sometimes only by radical surgery.

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*IS THE AGGLUTINATION TEST FOR UNDULANT FEVER SIGNIFICANT OF THE DISEASE?

By J. Heyward Gibbes, M. D., Columbia, S. C.

In asking the question which I have chosen as the title of this paper, I want to disclaim any intention of reflecting upon immediately the validity of the researches of many skilled laboratory investigators who have made such valuable contributions to the bacteriology and serology of the disease that we have come to know as Undulant Fever. The interpretation of what they have done, and are to do, must beleft to them, and we may rest assured that they will finally unravel the truth from the maze of data that they are now collecting. I am concerned entirely with the agglutination test for Undulant Fever as it is being applied to our clinical material, and wish to consider with you the question of it as a specific diagnostic criterion.

Wainwright has presented an excellent historical sketch of this disease, tracing its evolution from the clinical recognition of Malta Fever by Marston in 1859, the bacteriological investigations of Bruce and Hughes, the work of the British Commission in the period of 1904 to 1907, through the discovery of the bacillus abortus by Bang, Evans' studies showing the similarity of this organism to the bacillus mellitensis and the report of Keefer's case of Undulant Fever in 1924. Following the report of this case by Keefer, and going through the year 1925, 10 cases were reported over the United States as a whole in six widely separated states, exclusive of Texas, Arizona and New Mexico where Malta Fever had long been recognized as endemic. As illustrating the impetus given by the recognition of this disease, it suffices to point out that in 1928 and in the first five months of 1929 one thousand cases were reported in forty two widely scattered states exclusive of the same states above mentioned. And the number of cases has continued to mount since that time.

In South Carolina the first case of Undulant Fever was reported by Dr. Ernest Cooper in the fall of 1928, the diagnosis being established by a positive agglutination test and the recovery of the organism from the blood stream. Dr. H. M. Smith, the Director of the South Carolina Public Health Laboratory, tells me that in the year 1929 his laboratory made the diagnosis of this disease by means of the agglutination test in 21 cases. Here, again, we see an apparently alarming increase in the incidence of this disease when it is systematically searched for by this means.

The diagnosis of Undulant Fever must depend upon clinical observations, the agglutination reaction of the blood serum, and the growth of the micro-organism from the blood, urine, stool and other body fluids.

The general clinical picture is uniformly conceded to be unreliable. The disease is said to appear as an intermittent type, as an undulant type, as a malignant type and as

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*Read before the South Carolina Medical Assicoation, Florence, S. C., May 7, 1930.

an ambulatory type, but in none of these so called types is there a characteristic picture which stamps the condition as one thing and nothing else. The best that we can do on a clinical basis is to suspect.

The bacteriological studies, the recovery of the organisms in cultures, are, of course, satisfactorily conclusive. But it is interesting to observe in passing that difficulties are to be encountered here in that no less than eleven strains of the brucella organism have now been isolated and that very refined bacteriological methods are required for the differentiation of the bovine and porcine types varieties. So true is this that no less an authority that Theobald Smith has advanced the idea that the bovine organism is relatively harmless for man and that most of the human cases have been due to infection by the porcine variety. Unfortunately, facilities for culture studies are not available in the smaller urban and rural districts.

It is safe to say that the vast majority of the cases that have been reported in this country as Undulant Fever, and almost all of them from South Carolina, have been so designated on the basis of the agglutination test alone. The question arises as to how much reliance is to be placed in this test.

In February, 1929, I began the collection of blood from one hundred consecutive patients, all of them afebrile and free of all signs and symptoms that might be related to Undulant Fever, and had the agglutination test for brucella abortus done on them at the South Carolina Public Health Laboratory. From this series I obtained a positive report in seventeen cases in titres of 1-100 or higher.

I was decidedly puzzled by these results, wondering whether our population had such a relatively high incidence of active immunity to brucella infections, acquired through the drinking of infected milk or through contact with infected animals, or whether the agglutination test, as done in our Public Health Laboratory, was lacking in specific indications concerning this disease. In an effort to further elucidate the matter, I wrote to Dr. McCoy, Director of the United States Hygienic Laboratory, and asked if his laboratory would run a series of tests on specimens of blood that were to be examined at the same time in our Public Health Laboratory, and with the full knowledge of Dr. Smith that such a check was being made. It is due to the kindness and cooperation of these gentlemen that I am able to submit the data that are shown in Table 1.

TABLE 1

Analysis of 100 Agglutination Tests for Undulant Fever

U. S. Hygienic Laboratory_____5 positives.
1 to 10 in 2 cases.
1 to 20 in 1 case.
1 to 160 in 1 case.
1 to 1280 in 1 case.
S. C. P. H. Laboratory_____36 positives.
1 to 50 in 4 cases.
1 to 100 in 11 cases.
1 to 200 in 13 cases.
1 to 400 in 6 cases.
1 to 800 in 2 cases.

It will be seen from Table 1 that some degree of agglutinability for brucella abortus was found in the bloods of forty of the one hundred patients that were examined. One of these patients was suffering from a febrile illness of three months duration, had a palpable spleen, profuse sweats and a gram negative coccoid organism was recovered from the blood stream. The Washington laboratory reported a positive agglutination reaction in a dilution as high as 1 to 1280 and the South Carolina Laboratory a positive test in dilution as high as 1 to 800. A specimen of this blood was sent to Dr. H. L. Amoss, at the Johns Hopkins Hospital, and he reported that the serum failed to agglutinate any of the eleven strains of organism brucella that they had in any dilution. In no other instance of the positive reactions was there the slightest agreement between the two laboratories. In other words, all of the remaining thirty-five sera that were reported as positive by the South Carolina Laboratory were reported as entirely negative in Washington and the four which were reported as positive in Washington were negative in Columbia.

Four of the one hundred patients examined had fever. One of these was considered as a proved case of Undulant Fever on the basis

of the positive blood culture, and one patient ran a typhoid-like course for three weeks and recovered without a diagnosis having been made. The Undulant Fever patient gave a positive agglutination test in a dilution of 1 to 1280 in Washington and 1 to 800 in Columbia, and the other case gave a negative test in Washington and a positive in a dilution of 1 to 100 in Columbia. The third febrile case had æstivo-autumnal malarial parasites in the blood, and the fever readily responded to quinine. This serum was negative in Washington and positive in Columbia in a dilution of 1 to 100. The fourth febrile case had a post-influenzal respiratory infection with the fever disappearing as the signs in the lungs cleared. The serum was reported negative in Washington and positive in Columbia in a dilution of 1 to 200.

In one case of myocardial insufficiency in a man 54 years of age, afebrile, with a history of typhoid fever 26 years before, the South Carolina Laboratory gave a positive report in a dilution of 1 to 800. Of the six patients who were reported as showing agglutination reactions in dilutions of 1 to 400, none of them had fever and none of them gave a history of any typhoid-like illness in the past. Of the thirteen patients who showed positive tests in dilutions as high as 1 to 200, only one had suffered in the past from a fever which was thought to be typhoid. Likewise, in the eleven patients who gave positive reactions in dilutions of 1 to 100 there was only one who had a history suggestive of typhoid fever..

From the Washington Laboratory there is one case that may be said to need explanation, the one reported positive in a dilution of 1 to 160. This was a man, 56 years of age, suffering from arteriosclerosis and hypertension, who had been under observation for years, who had reported for a periodic examination, and who had no history of a typhoid-like illness.

The clinical significance of the agglutination tests is variously estimated in the literature. Some authors take the position that a negative test is conclusive evidence that the patient is not infected with the organism of Undulant Fever, while others state that the test is often entirely negative in the presence of the disease. The latter opinion has led to the development of the intradermal test which has been described by Giordano. Most authors take less extreme positions. But some state that an agglutination reaction with a serum which is diluted 1 to 15 is significant, while others look with great skepticism on these reactions in low dilutions, and insist that the reactions should not be interpreted as specific in dilutions of less than 1 to 100. Dr. H. L. Amoss, who has had a fairly wide experience with this disease in the Johns Hopkins Hospital, told me that in his opinion little reliance should be placed in the agglutination test except in very high dilutions. An opinion of this kind, based on thorough clinical observations of patients with the disease, with adequate opportunity for the correlation of bacteriologcial and serological studies appeals to me as deserving of respectful consideration, and my own limited experience tends to support it.

It seems to me that the data that are herewith presented cast a legitimate doubt on the accuracy of the clinical statistics that are being rapidly accumulated over this country concerning the incidence of Undulant Fever among the population. It is my opinion that the agglutination test alone, especially in relatively low dilutions of sera, is not sufficient for a diagnosis of the disease. Not only is the possible truth of this idea important from the standpoint of clinical medicine and public health, but it is important because of serious economic hardships that might result to the dairy industry from a misconception of the dangers of infected cows to the consumers of milk. Theobald Smith has called attention to the fact that contagious abortion has been known to exist in the cattle of this country for some thirty or forty years, with the peak of its incidence among them some ten years ago. It is variously estimated that 35% to 94% of the dairy herds are affected, and the question naturally arises why, if the bovine type of organism be pathogenic for man, the disease is not far more prevalent among the people. It may be that Dr. Smith is correct in his suggestion that the bovine type of brucella is relatively harmless to man. At any rate, there is sufficient uncertainty surrounding the entire situation to warrant the medical profession in refraining from making

radical demands upon dairymen for the sacrifice of valuable cows.

Summary: Attention is called to the relatively rapid increase in the number of reports of Undulant Fever cases over the United States as a whole and in South Carolina in particular since the institution of agglutination tests for this disease. The fact is pointed out that this test is the sole criterion for diagnosis in the great majority of the cases so reported. A report is made of the results of this test in a series of 100 patients, only one of whom was proved to have Undulant Fever. Discrepancies in the findings of two laboratories on the same material is analysed.

Conclusions:

1. It is probably that the agglutination test for Undulant Fever is leading to the reporting of this disease much more often than it really occurs.
2. In ninety-nine patients who did not have Undulant Fever the agglutination test was reported in some degree positive in thirty-nine.
3. On the basis of these facts the medical profession should assume a conservative attitude toward the clinical aspects of the situation and toward the dairy problems involved.

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DISCUSSIONS

Dr. E. A. Hines, Seneca, S. C.: Dr. Walter M. Simpson of Dayton, Ohio, Director of the Miami Hospital Diagnostic Laboratories, who has made extensive studies on the disease, has pointed out that there is great need for standardization of laboratory technique in the investigation of Undulant Fever. When this is brought about there will probably be a better correlation of laboratory findings with clinical manifestations. It must be conceded though that the laboratory men have made important contributions to the study of Malta Fever in all parts of the world. Dr. Simpson has also pointed out that a large number of physicians in his territory have made the diagnosis of Undulant Fever from the clinical symptoms alone and subsequently these findings were checked up by the laboratory. When it is considered that Undulant Fever is to a considerable extent a small town and rural disease in this country it is highly important that medical men realize that often a diagnosis may be made without the laboratory but of course every effort should be made to have these diagnoses confirmed. As Dr. Gibbes has brought out there should be a note of conservatism both in the literature and elsewhere and the dairy industry should be considered from the same standpoint. I believe, though, that there are many more cases of Undulant Fever than is apparent at the present time. Dr. Gibbes does not think so. From a preventive medicine standpoint nearly all authorities agree that some day we must come to pasteurized milk as one of the important measures to be observed. I am grateful to Dr. Gibbes for bringing this whole matter to our attention in such a graphic way.

Dr. H. M. Smith, Columbia, S. C.: The agglutination test for undulant fever, while not in its infancy, cannot be said to have yet reached the age of discretion. It is far from being standardized, every laboratory doing it its own way with antigens of varying kinds, sensitivity, and density. Dr. Gibbes' experience with conflicting reports from different laboratories emphasizes the great need for the development of at least an approximately uniform, standard technic. There is a special committee of bacteriologists trying to get a little order out of this chaos now.

In spite of its present defects the test seems to me to have potential value as a specific test when properly interpreted, but there is considerable confusion as to what is to be considered a

positive test and what it means after it is obtained. By a "positive" agglutination test for undulant fever the reporting laboratory means only that the blood shows immune substances of such amounts that they show up readily in appropriately high dilutions of the serum. The patient may have undulant fever at the time, may have had it in the past, may be naturally immune, or may have acquired immunity by prolonged exposure to the infection without ever having exhibited any clinical manifestations of the disease,—the blood in each case simply showing the presence of antibodies. This closely parallels the meaning of the Widal test for typhoid fever. The antigen used in the test for undulant fever must be sufficiently dense and the serum dilution correspondingly high before the reaction can be considered of any diagnostic value. At the State Board of Health Laboratory with the density of antigen now used (silica standard 500) we do not now regard a reaction as actually positive unless it shows complete agglutination in a serum dilution of at least 1 to 200 agglutination in a 1 to 100 dilution being considered only weakly positive. The Laboratory leaves the diagnosis to the physician who should regard a positive blood reaction in the light of a symptom only. Next to that "good, five-cent cigar," what this country needs most is better interpretation of all laboratory findings. To diagnose undulant fever on a positive blood test alone would be foolish, and Dr. Gibbes' warning in this connection is very timely. The clinical signs and symptoms must be present, whether with or without agglutination, and although the disease may not have a regular stereotyped set of signs and symptoms, they are often sufficiently characteristic to lead, I believe, to a good working diagnosis in the hands of an intelligent practitioner, particularly if bolstered up with a strongly positive blood reaction. It would be fine of course to prove the diagnosis always by isolating the organisms from the blood, but under the circumstances that is obviously impracticable.

During the time the tests on Dr. Gibbes' series of patients were made in Columbia and Washington we were using a killed antigen 5 times thinner than the living antigen used at Washington. We soon found out, aided especially by this series of Dr. Gibbes' tests, for which we wish especially to thank him, that with our thin antigen no positive reaction could be considered diagnostic of disease or immunity with a titer of less than 1 to 4—or 500. Of his 36 cases showing some degree of positivity only 8 were of sufficiently high titer to be considered, in the light of our experience gained at that time, as actual positive reactions. Of these 8 only 2 could be considered as actual cases of undulant fever, 1 sure and 1 doubtful, the remaining 6 showing only reactions of immunity.

In 1929 the State Board of Health Laboratory found that 21 blood specimens showed what we consider to be actual positive agglutination tests with abortus antigen. During this same year 17 cases of undulant fever were reported in the State, most of them, perhaps all, in association with history, signs, and symptoms indicative of this disease, including positive blood tests. The same is true for the numerous cases being reported in the literature all over the country, many of them being confirmed by positive blood cultures. I cannot therefore quite agree with Dr. Gibbes' conclusion that the agglutination test has been the sole criterion in the diagnosis of the great majority of cases reported in the U. S.

Since the attention of physicians of the country has been especially directed to undulant fever there has been a considerable increase in case reports, but I doubt if there is any special increase in the usual incidence of the disease. 1000 cases reported in 17 months from 42 States with a population of over 100 million and South Carolina's 17 cases in 1 year with about 2 million population, even if all are accurate diagnoses, amount to comparatively very little. Less than 1.5% of the population appear to be susceptible when exposed constantly to abortus organisms, but until contagious abortion in cattle has been effectively controlled, which will require many years, I prefer my milk free from living abortus organisms, whether few or many and whether I am immune or not, and strongly advocate pasteurization, the logical remedy for infected raw milk.

Dr. M. H. Wyman, Columbia: This agglutination test may not have reached a state of dependableness yet, but we do not want to get it confused with other laboratory tests which have proven valuable. I have had occasion to check our State Laboratory records on Wassermanns by checking with the Veterans' Bureau Hospital in Columbia. At several months' intervals we have checked them by a series of Wassermanns. Our State Laboratory report on the Wassermann test is very, very valuable. Dr. Hines said we must connect up the laboratory findings with the symptoms, but in syphilis we may not have any symptoms and may not have any history. But on a four plus Wassermann, that patient has syphilis. If there is any doubt in your mind, you may repeat it. But if it is a positive Wassermann, repeated, that patient certainly has syphilis, whether he has any symptoms or not.

Dr. George R. Wilkinson, Greenville: There is one difficulty in doing any work on this particular disease, and that is the difficulty of getting the dairymen to cooperate. They are perfectly willing to do anything you want to do, provided you can keep it absolutely secret that you are doing anything whatever on their place. At the present time we are conducting a series of ex-

periments on one dairy farm in Greenville, and the interesting thing about it is that the work has to be done with the greatest degree of secrecy. These people feel that anything that comes out in any way, shape, or form, even the fact that you are on their place, would injure their business. I wish we could get them over that fear, because I do not think it would injure their business. In order to conduct some experiments, we are conducting them at a time when no one sees us go in the dairy place or come out. It makes it very much more expensive to carry on this work (it is all done by private means), makes it three or four times more expensive. We have excellent cooperation from the veterinarians. Even the man I get my own milk from, when I asked him once or twice to let me do some work out there was afraid to let me do it. He asked two or three about it, and they said if he let me come out there too often it would ruin his business. So I had to get someone who does not know me at all.

In the first place, we have to find out what the disease is like clinically and then develop the laboratory means for backing up the clinical side. I think this series very clearly illustrates the weakness of the laboratory; and I fear that, despite the fact that the laboratory is an enormous aid, and while I conduct one myself, at the same time I feel that the emphasis would be more properly laid on the clinical observation. So far as the data presented today are concerned, if I had to risk an opinion on a case I would rather risk it on the clinical data than the display of laboratory data we have seen.

Dr. Gibbes, closing the discussion: Of course, it is very tempting to enter into a philosophical discussion of the relative merits of clinical medicine and laboratory medicine, but I shall not do so at all. There are just one or two points I want to make. In the first instance, one of these cases I reported there had the agglutination test done by the state laboratory, which gave us a positive report. That was negative in Washington. That has led me into this questionnaire over the whole country to see what the technic of the various laboratories might be—whether they might be using a thinner antigen and consequently cluttering up the records with cases of undulant fever that do not exist.

Dr. Smith's suggestion about pasteurizing milk seems to me to be the answer to the public health problem, not only as regards undulant fever but also other problems.

One point of scientific interest is the thought suggested by Dr. T. Smith that possibly the increase in undulant fever over the country as a whole might be due to pasteurized milk. He brings out the point that contagious abortion in cattle has been known in this country for forty years. It reached its maximum in cattle herds ten years ago, whereas our wave of undulant fever in people is now at its height. Dr. Smith suggests that the drinking of raw milk has built up an immunity which is now broken down to some extent, due to the use of pasteurized milk.

CORRECTION

In the May issue of the Journal our correspondent informed us that Dr. W. H. Carrigan of Summerton had been elected to be director of the laboratories of the new hospital in Sumter. This information was incorrect and we are glad to make a note of it.

SCIENCE OF MEDICINE

Medicine until modern times was a species of dramatic play upon emotions rather than a science made useful through technology. It combined centuries of experience in trial and error in reactions from many drugs, with a maximum of skill on the part of the practitioner in a kindly art of making the patient feel as hopeful and comfortable as possible while he was dying of the disease, the origin and treatment of which were as yet undiscovered. Providence was made responsible for his fate rather than the bacillus which should never have been allowed to infect him.—From Address by President Hoover in Commemoration of the Eightieth Birthday of Dr. William Henry Welch.

THE INFLUENZA DISCOVERY

With little if any apparent warrant, it is again announced, for at least the tenth time in five years, that the causative organism of influenza has been discovered and that it is hoped to prepare a vaccine. There is thus far little or no evidence in scientific medical literature, or even in spoken addresses, to indicate that I. S. Falk, Ph.D., and his associates have progressed any further toward the solution of this problem than have workers in other parts of the world, now or in the past. Even the staid New York Times succeeded in confusing antitoxins, vaccines and similar scientific terms in a manner that can be explained only by the undue haste with which the announcement was rushed to the audience. The furor is inexcusable.—Jour A. M. A., Dec. 21, 1929.

SURGERY

Wm. H. Prioleau, M.D., Charleston, S. C.

THE INJECTION TREATMENT OF VARICOSE VEINS

The injection treatment of varicose veins is steadily coming into general use, while it is a valuable addition to our armamentarium, it is not without its dangers and bad results. To evaluate these properly is difficult from a small series of cases. Thus it will be well to consider the experience of Doctor De Takats and Doctor Quint in treating a series of 500 cases over a period of three years. In Surgery, Gynecology and Obstetrics, March, 1930, they give a very clear presentation of the subject.

The treatment originated in 1853 with Pravaz, the inventor of the hypodermic syringe. In its early stages it met with ill success due to the use of strong coagulating solutions such as perchloride of iron, alcohol, and carbolic acid. Its present success is due chiefly to the efforts of Linser, Sicard and Nobl in introducing hypertonic solutions of glucose, sodium chloride, and sodium salicylate. Bad results are still reported, due to using the treatment in unsuitable cases, and to poor judgment in the choice of solutions.

In varicose veins the circulation is sluggish or reversed due to incompetency of the valves and lack of elasticity of the walls of the veins. As a result there develops pain, edema, eczema anulceration. By obliteration of the varicosities the circulation of the tissue improves and these conditions clear up. This is accomplished by the injection into the vein of some substance which will irritate the intima, thus causing a gradual thrombus formation with simultaneous beginning organization. Strange to say there is very little danger from embolism.

The cases most suitable for this treatment are those with varicosities only below the knee, and with an unobstructed deep venous system. Perthes' test is very helpful in determining the patency of the deep veins. It is made by obstructing the superficial veins at the thigh with a blood pressure cuff and having the patient walk. The varicosities diminish in size if the deep venous system is patent; this is due to the contraction of the muscles forcing the blood out of the deep veins and aspirating blood from the superficial ones. Definite local contra-indications to the use of the treatment are an acute phlebitis of the varicosities, and an impairment of the arterial circulation as in diabetes, Raynaud's disease, and endarteritis obliterans. The authors stress the importance of making a thorough examination of the patient, as some systemic diseases make the treatment inadvisable, at least for the time being. Only by proper selection of cases can satisfactory results be obtained and dangers avoided.

The leg is placed in a horizontal position. The needle is inserted and the vein stripped on each side so as to empty the segment to be treated. The injection is made very slowly. The needle is withdrawn and a firm pad is applied. Toward the end of the injection, of just after it, there is frequently a cramping pain of the leg. A burning pain at the site of injection is indicative of an extravenous deposit. This should be carefully avoided as with some solutions it will cause a slough. Following the use of some drugs such as quinine and sodium salicylate, a systemic reaction occurs.

The authors are of the opinion that fifty (50%) per cent glucose solution is the safest and most satisfactory for general use. Sodium chloride, thirty (30%) per cent, sodium salicylate, fifteen (15%) per cent and quinine and urea, ten (10%) per cent are more effective, but are more likely to cause sloughs and systemic reactions. Recently they have obtained very good results with glucose, fifty (50%) per cent and sodium chloride, thirty (30%) per cent in the larger thicker veins.

One or more injections may be made at the same sitting. It is well to inject the uppermost and lowermost segments of the same vein at the same time. Throughout the

course of treatment, and for some weeks following, a pressure bandage is kept on the leg. The patients return for further injections at intervals of five to ten days. They are allowed to follow their usual occupations.

In cases with varicosities above the knee it is advisable to ligate the saphenous vein before beginning the injection treatment. This can be done under local anesthesia. It does not necessitate the patient's remaining in bed.

The end results of this treatment compare very favorably with those of operative treatment. The outstanding advantage is that the patient remains ambulatory and loses no time from work.

The failures were found to belong to three groups:—(1) those with a long dilated saphenous vein—(2) those with saccular dilatations, and (3) those with incompetency of the valves of the saphenous system, and of those between this and the deep system. In the first group high ligation of the saphenous is advised; in the second group, the use of stronger solutions; and in the third group, radical operation.

It should be emphasized that the authors recommend this form of treatment for only certain types of varicose veins, and that they recognize definite local and general contraindications. Their tendency is toward conservatism, using weaker and safer solutions at first, and stronger ones later if necessary. Their claims are that it is safe, if properly given, simple, effective, and economical.

INCORRECT LABELING OF UPSHER SMITH DIGITALIS PREPARATIONS

Tablets Folia-Digitalis (Upsher Smith) one grain, Tincture Digitalis (Upsher Smith) and Capsules Folia-Digitalis (Upsher Smith) one grain, were exempted by the Council on Pharmacy and Chemistry as having the status of official substances. The Council reports that a committee for the study of the actions of digitalis in patients suffering with pneumonia used tablets of digitalis Upsher Smith and tablets of digitalis of another firm and directed that patients receive these in uniform doses calculated to induce a moderate degree of digitalization, assuming that both specimens of tablets were labeled correctly; that after a total of 258 patients had been treated it was discovered that the tablets of digitalis Upsher Smith induced both severe and minor toxic symptoms far more frequently than those of the other firm, and that an examination of the records brought out that minor toxic symptoms were more than ten times as great in those who received the Upsher Smith tablets as in those who received the other firm's tablets and that the mortality was forty-nine percent of all cases of pneumonia treated with the first, as compared with thirty-eight percent in all those treated with the other tablets. The Council further reports that both brands of tablets were then assayed; that the tablets of the other firm were found to be of activity stated on the label, and those of Upsher Smith to be twice the activity stated. Upsher Smith has assured the Council that any of his misbranded preparations on the market will be called in, and that in the future the greatest care will be taken to insure that the potency of these will be stated correctly.—(Jour. A. M. A., April 26, 1930, p. 1305).

Eleven Colleges Require Internship for Degree.—Eleven medical colleges have adopted the requirement of a fifth year to be spent by the student as an intern in an approved hospital or in other acceptable clinical work before the M.D. degree will be granted. These colleges and the years when the requirement became effective for marticulants and graduates are as follows:

	Affects Matriculants	Affects Graduates
Uni. of Minn. Med. School	1910-11	1915
Stanford Uni. School of Med.	1914-15	1919
Rush Med. Col. (Uni. of Chicago)	1914-15	1919
Uni. of California Med. School	1914-15	1919
Marquette Uni. School of Med.	1915-16	1920
Northwestern Uni. Med. School	1915-16	1920
Uni. Ill. Col. of Med.	1917-18	1922
Loyola Uni. School of Med.	1917-18	1922
Detroit Col. of Med. & Surg.	1919-20	1924
Uni. of Cincinnati Col. of Med.	1922-23	1926
College of Medical Evangelists	1922-23	1927

—The Diplomate, May 1930.

EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M. D., F. A. C. S., CHARLESTON, S. C.

SIMPLE MASTOID WOUND

ARCHIVES OF OTOLARYNGOLOGY, MAY, 1930

Dr. E. R. Roberts

Post Operative Technic

Only through the removal of all necrotic bone and the obliteration of pockets and recesses so that drainage is established for the most deeply seated cell, surgically accessible, is the stage set for a satisfactory postoperative period.

The number of cases in which one can be certain that the aditus becomes shut off from the area operated on, obliterating the antrum permanently, can be determined only by leaving the would widely open and watching the granulations mechanically obstruct its distal end. Too often while pursuing this method of postoperative treatment the operator will experience the disappointment of seeing this small area of granulation tissue break down as a result of a new infection or reinfection of the middle ear, or because the newly formed blood vessels in this tissue necessarily find their origin within a lesser radius than if the wound were closed even partially, in its uppermost part. A purposeful effect to shut off the middle ear from the mastoid cavity means more routine instrumentation in the aditus than many are willing to execute. In fact its execution is not unattended with danger in young patients, as thorough and complete destruction of this mucosa as well as that of the antrum is necessary. Only time will determine how thorough has been this destruction. It is my opinion that the great majority of mastoid antrums are restored in the healing process, and that Nature closes the entire wound more readily when this method of repair is permitted.

Clinical evidence is lacking, that any antiseptic used as such promote safer or more rapid convalescence. Irrigation, however, does remove mucus and infected material mechanically, in event the granulations are not sterile, and dislodges spicules of bone which occasionally find their way to the surface.

The five percent iodoform packing routinely used as the primary packing is somewhat irritating and inhibits bacterial development both of which are countable advantages.

The trend of the times seems to be to close rather thoroughly the simple mastoid incision.

With regard to the blood clot method of post operative treatment I would say that it is unreasonable to suppose that irritation of the wound with any antiseptic solution, prior to suturing, whether the same traverses the middle ear or not, sterilizes the surfaces involved, making safe the closure of such a wound. If this is done one gambles on Nature's ability to sterilize the infected clot that forms promptly.

It is aided (a) by the removal of the great mass of infected structure; (b) on the character of the infection; (c) resistance of the patient ; (d) whether Nature may have thrown out a perfect barrier of resistance against deep-seated complications. (e) This barrier must not have been broken down by the surgical operation.

It would also seem unsurgical to attempt to bring about or to permit closure of a mastoid wound or even to shut off the aditus prior to the cessation of discharge through the drum membrane into the external auditory canal. "Posterior drainage" was called for postoperatively, and Nature should not be prevented from maintaining such, so long as she will.

The value from the use of suction applied to the external auditory canal is doubtful. When the tympanic mucosa becomes distended and thrown into folds as actually to prolapse through myringotomy incision, one should hesitate to apply a physical force that might bring about such a result more readily.

Four times within two years I have noted this development, necessitating amputation of this portion of the mucosa which essentially had become a polyp, and which, of course, materially interfered with drainage. Recovery was then prompt in each case.

If it should be determined that a given wound is best cared for by a thorough process of rather firm and oft repeated packings, no better method can be pursued than one in which a surgical solution of chlorinated soda is used with a modification of the original technic.

After a few dressings in which the wound has been packed with a strip of plain selvaged, ½ inch gauze, saturated in this solution, granulation appears of a character not seen when any other medicant is used. This salmon pink granulation is "bloodless" to the extent that it may be literally scrubbed with gauze sponge without bleeding, and is practically anesthetic. This granulation tissue becomes sterile early in the process and in the end produces the firmest scar tissue possible; naturally, because of these characteristics the entire healing process is much prolonged.

With a good deal of surprise and satisfaction it was noted how readily and satisfactorily simple mastoid wounds would close if treated along the general line so long followed in the postoperative management of disease of the nasal accessory sinuses; namely, by providing for æration and drainage.

A primary dressing of iodoform gauze, at which time the wound is closed with deep silkworm gut sutures except in its lowest part.

The primary dressing is not completely removed, as a rule, until the fourth day.

A dressing consisting of a segment o` a rubber catheter, of suitable size and length and fenestrated, and double kidney-shaped layer of ordinary bandage material perforated in its center. After surface sterilization and wound irrigat on, the distal end of the rubber tube is introduced into the antrum and its proximal end is passed through the perforation in the bandage material to which it

*Carrel Daken Solution.

adheres by means of a "liquid adhesive" preparation. Application of this preparation about the margin of the gauze likewise fixes the dressing to the skin. Because of the remarkable and generally satisfactory behavior of the new formation tissue stimulated by the properties of solution of chlorinated soda, this drug is recommended as the irrigant.

Aeration and drainage are possible uninterruptedly.

It is surprising to note the tremendous quantity of secretion that will find its way out of a simple mastoid wound when the aforementioned provisions are made for its escape. Almost a constant drip is occasionally observed during the first few days, so that protection of the clothing of the neck and shoulders may be necessary.

So great is the quantity of this material that, if once observed, the chances taken in a blood clot dressing and the disadvantages of a "mastoid dressing" as illustrated in textbooks become so apparent that one is likely never to give consideration to them again if other circumstances will permit.

The time during which drainage through rubber tubing is called for is indicated entirely by the quantity of drainage which is at first purulent, later surupurulent and serous and finally ceases. At this time the use of the tubing is entirely abandoned. One-half to one-fourth segment of such a drainage tube or even a portion of a small rubber band may be used toward the end.

A "drain" or "wick" of gauze used for the purpose of "drainage" eventually becomes a plug as the healing process advances. This never becomes a fact in the use of a rubber tubing or a segment thereof.

If the cases of those patients who considered their condition due to a "head cold" are considered as upper respiratory grip, grip accounted for 59.8 percent of this group of simple mastoid operations. Scarlet fever accounted for 14.9 percent, measles 10.4 percent, tonsillitis 8 percent, and whooping cough, nasal diptheria, sea bathing and pernicious anemia, each 1.5 percent.

The roentgenologic evidence of surgical mastoid disease failed to agree with the clinical evidence in 36.3 percent.

After recovery, sixteen patients suffered with twenty-six suppurative infections of the middle ear, in nine of whom infection develop-

ed in the mastoid scar. All the conditions were healed by simple drainage.

Summary

A thorough and complete mastoid operation is essential to satisfactory healing.

The majority of mastoid antrums are restored in the healing process.

Wound management providing for constant æration and drainage shortens the dressing period and tends toward excellent cosmetic results.

SOCIETY REPORTS

PROCEEDINGS OF THE MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL, TUESDAY EVENING, APRIL 22ND, 1930, AT 8:30 O'CLOCK.

The meeting was called to order by the President, Dr. J. Sumter Rhame:

Present:

Doctors: Allen; A. E. Baker, Jr.; Banov; Barnwell, Beach; Bowen; Bowers; Burn; Cannon; Chamberlain; de Saussure; F. B. Johnson; Kollock; McCrady; McInnes; Maguire; Mood; O'Driscoll; F. L. Parker; W. H. Price; Prioleau; Rutledge; Sanders; W. A. Smith; Taft; Waring; Wild; I. R. Wilson; L. A. Wilson; R. Wilson; Zerbst; Whaley; W. H. S. Speissegger; Hope; I. R. Wilson, Jr.; Sughrue.

Guests: Dr. Roe E. Remington and Mr. Bartew Culp, of the South Carolina Food Research Commission; internes, and senior medical students.

The minutes of the meeting of April 8th were read and confirmed.

Under Reports of Officers and Committees, Dr. C. W. Kollock, Chairman of the committee on the Medical Society Float, read a letter from Mayor Thomas P. Stoney, in which he praised most highly the excellent float which had been placed in the parade for the celebration of the 250th Anniversary of the City of Charleston, and heartily thanked the members of the Society for their cooperation. This was received as information.

The Secretary read a letter from Dr. W. H. Zeigler, requesting that he be allowed to have photostatic copies of certain of the proceedings in some of the old minute books of this Society, in relation to the part that this Society took in the formation of the national Pharmacopœia, as he desired to use these as an exhibit at a coming convention, to be held in Washington, D. C. It was moved, seconded and carried that this request be granted.

The Secretary read the following letter from Dr. Leon Banov, Secretary of the Board of Health of the City of Charleston:

Department of Health
Charleston, S. C.
271 Meeting Street, Charleston, S. C.
April 22nd, 1930

To the Officers and Members of
The Medical Society of South Carolina.

Gentlemen:

At a meeting of the Board of Health held April 15th, 1930, the report and recommendations of your Society as transmitted to us through your Secretary, was carefully considered.

I was instructed to inform you that the Board is not unmindful of the splendid co-operation heretofore given by your Organization and that the Department of Health is at all times quite ready to co-operate with the Medical Society of South Carolina.

In accordance with the recommendations of your Committee, our Department will bring to a close at the end of this year, the Educational Immunization Clinics conducted at the Health Centre and in the City Schools, and beginning with 1931, the administration of such preventive treatments will be limited only to such persons as are unable to pay for them.

Our Well Baby Clinics have always been intended for indigent people; and in view of your statement that some parents now make use of these Clinics who could afford to employ a private physician, we shall in future attempt to investigate such cases to the best of our ability.

We also note your recommendations that the Roper Hospital eventually take over all educational and prophylactic Clinics, admitting at the same time that at present the Hospital is not equipped for such a purpose.

We shall be very glad to have you again take this matter up with the Board at such time as the Roper Hospital can demonstrate its ability to maintain these Clinics.

Again assuring you of our desire to co-operate fully with your Society, I am,

Yours very truly,
(s) Leon Banov, M. D.
Secretary
Charleston Board of Health

It was moved, seconded and carried that this be received as information and spread on the minutes.

The Secretary read a letter inviting the Society to attend the Florence Nightingale Memorial Service, to be held at St. Andrew's Lutheran Church on Sunday, May 11th at 8:00 P. M., under the auspices of the South Carolina Graduate Nurses' Association, District No. 1. This was received as information.

At 9:00 P. M., the Scientific Program was called.

Dr. D. L. Maguire reported the successful treatment of a case of staphylococcis osteomyelitis, by the use of maggots. This was discussed by Drs. Taft, McInness and O'Driscoll, Dr. Maguire closing.

Dr. T. E. Bowers reported a case of acute peritonitis, the origin of which could not be found at operation. This case presented some interesting bacteriological findings. This was discussed by Dr. W. H. Price, Dr. Mood, and others.

Dr. Roe E. Remington, the Director of the Food Research Commission laboratory, presented some interesting preliminary hemoglobin and basal metabolism reports, being made on pupil nurses and medical students. This was discussed by Drs. Prioleau, F. B. Johnson and Allen, Dr. Remington closing.

There being no further business, the meeting adjourned.

W. Atmar Smith
Secretary

PROCEEDINGS OF THE SPECIAL MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL, TUESDAY EVENING, APRIL 29TH, 1930, AT 8:30 O'CLOCK.

The meeting was called to order by the President, Dr. J. Sumter Rhame.

Present:

Doctors: A. E. Baker, Jr.; Ball; Banov; Beach; Bowen; Buist; Burn; Byrnes; Cain; Cathcart; Chamberlain; W. H. Frampton; W. H. Johnson; Lynch; McCrady; Martin; Mood; E. F. Parker; Phillips; F. R. Price; Prioleau; Ravenel; Rhame; Rutledge; J. E. Smith; W. A. Smith; Waring; Whaley; Hope; Sughrue; Sams; Hay.

The President stated that he had called this meeting in order to consider the Memorandum of Agreement between City Council and the Medical Society in regard to the acceptance of the white contagious unit. The President then called upon Dr. C. McF. Mood, Chairman of the Board of Commissioners to bring the matter before the Society.

Dr. Mood stated that Corporation Counsel had submitted a Memorandum of Agreement by which it is proposed that the City Council of Charleston shall turn over to the Medical Society of South Carolina for maintenance and operation a white contagious unit, to be donated to the City by Sarah Bennett Smith and John R. Bennett. He said that the Board of Commissioners had thoroughly studied the agreement, and had secured the advice of the counsel for the Medical Society. Mr. George Moffett, and he advised that the agreement was legal, and the Board decided to recommend to the Society that it be ratified. He then read the following:

THE STATE OF SOUTH CAROLINA.

MEMORANDUM OF AGREEMENT made and concluded at Charleston, S. C., this day of April, A. D. 1930, by and between THE CITY COUNCIL OF CHARLESTON, a municipal corporation, party of the first part, and THE MEDICAL SOCIETY OF SOUTH CAROLINA, party of the second part, WITNESSETH:

WHEREAS, Sarah Bennett Smith and John R. Bennett, of the City of Charleston, have offered to give and donate to The City Council of Charleston as a memorial to the late Andrew B. Murray, an independent hospital unit or building for the reception and treatment of white patients suffering from contagious diseases, the said building or unit to be erected by the said Sarah Bennett Smith and John R. Bennett in accordance with plans submitted by them to The City Council of Charleston, and the said unit or building, when so erected to be operated as a part of and in conjunction with the present Roper Hospital, and the said offer has been accepted by the said City Council of Charleston as will more fully appear by reference to the proceedings of the City Council at its regular meeting on the 8th day of April, 1930, and

WHEREAS, the land upon which the said unit or building is proposed to be erected includes a portion of the premises conveyed by The City Council of Charleston to The Medical Society of South Carolina by deed dated December 24th, 1904, and of record in the R. M. C. Office for Charleston County in Book U-24, page 197, and it has been agreed by and between the said The City Council of Charleston and the said The Medical Society of South Carolina that the proposed building or unit, as and when erected, shall be conveyed by the said The City Council of Charleston to the said The Medical Society of South Carolina, subject to the trusts, terms and agreements hereinafter set forth:

NOW THEREFORE, the parties hereto have covenanted and agreed, and by these presents do covenant and agree, as follows, that is to say:

1. The City Council of Charleston shall and will upon the completion of the hospital unit or building above mentioned, convey the same by proper deed in fee simple to the said The Medical Society of South Carolina, in trust to maintain, administer and operate the same for the uses and purposes of the donation and gift by the said Sarah Bennett Smith and John R. Bennett, that is to say, as an independent unit or hospital building for the reception and treatment of white patients suffering from contagious diseases.
2. The said unit or hospital building shall forever be known as The Murray Memorial Hospital.
3. The said The Medical Society of South Carolina shall forever maintain, administer and operate the said unit or hospital building as a part of and in conjunction with the present Roper Hospital for the purposes aforesaid, and for none other, under such reasonable rules and regulations as now exist or may from time to time be prescribed by The City Council of Charleston for the admission and care of patients at the said hospital.

IN WITNESS WHEREOF the said The City Council of Charleston has caused these presents to be signed in its corporate name, by its Mayor, and its corporate seal to be hereunto affixed, attested by its Clerk of Council, and the said The Medical Society of South Carolina has caused these presents to be signed in its

corporate name and its corporate seal to be hereunto affixed and attested by its proper officers thereunto duly authorized the day and year first above written.

THE CITY COUNCIL OF CHARLESTON,

By_____
As Mayor.

Attest:

_____
Clerk of Council.

THE MEDICAL SOCIETY OF SOUTH CAROLINA,

By_____
As President

_____

_____
As Secretary

STATE OF SOUTH CAROLINA
COUNTY OF CHARLESTON

PERSONALLY appeared before me_____ who being duly sworn says that he saw Thomas P. Stoney, as Mayor, of the City of Charleston, sign, affix the corporate seal of The City Council of Charleston, attested by J. C. Barbot, Clerk of Council, and as the act and deed of The City Council of Charleston, witnessed the execution thereof.

SWORN to before me this _____
day of April 1930.

_____

STATE OF SOUTH CAROLINA
COUNTY OF CHARLESTON

Personally appeared before me_____ who being duly sworn says that he saw J. Sumter Rhame, as President, and W. Atmar Smith, as Secretary, of The Medical Society of South Carolina, sign, affix the corporate seal and as the Act and deed of the Medical Society of South Carolina, deliver the within deed; and that he with_____ witnessed the execution thereof.

SWORN to before me this_____
day of April, 1930.

_____
Notary Public for South Carolina.

The undersigned, Sarah Bennett Smith and John R. Bennett, hereby consent to the above Agreement.

_____

_____

Dr. R. S. Cathcart arose and stated that he desired to introduce a resolution ratifying the agreement, but before doing so, he desired to make the move that the record of the meeting of April 26th, 1930, be expunged. Dr. Mood pointed out that the President had ruled that the meeting was illegal, but was overruled by vote, and the matter was considered. After some discussion, in which Dr. E. F. Parker, Dr. Buist, and others took part, Dr. Cathcart withdrew this motion. He then stated as follows: The Proposed Agreement between the City Council of Charleston and The Medical Society of South Carolina, for the acceptance from City Council by The Medical Society of South Carolina, of the building to be donated to the City of Charleston by Mrs. Sarah Bennett Smith and Mr. John R. Bennett for the care of contagious cases, having been submitted and read to the Society, BE IT RESOLVED that the Agreement submitted, be executed and delivered on behalf of The Medical Society of South Carolina, by the President and Secretary, and the corporate seal affixed. Dr. Cathcart's resolution was seconded and carried, Dr. W. H. Johnson voting against it.

The next item for which the meeting was called was then taken up. The Secretary read a letter from Dr. L. S. Miles, in which he enclosed a check for $15.00 to cover his dues for 1929, requesting reinstatement and transfer to the Marion County Medical Society. It was moved, seconded, and carried that Dr. Miles be given a transfer card to the Marion County Medical Society.

There being no further business, the meeting adjourned.

W. Atmar Smith, M. D.
Secretary

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL, TUESDAY EVENING, MAY 13TH, 1930, AT 8:30 O'CLOCK

The meeting was called to order by the President, Dr. J. Sumter Rhame.

Present:

Doctors: A. E. Baker; B. R. Baker; Ball; Barnwell; Beach; Beckman; Bœtte; Bowen; Bowers; Buist; Burn; Byrnes; Cain; Cannon; de Saussure; Finger; Jenkins; Kollock; Mitchell; O'Driscoll; Palmer; Pearlstine; Prentiss; Prioleau; Ravenel; Rhame; Richards; Rutledge; Scharlock; W. A. Smith; Waring; Wild; I R. Wilson; Zerbst; Whaley; W. H. Speissegger; Hope; I. R. Wilson, Jr.; Sughrue; Bold; Hay.

The minutes of the meeting of April 22nd were read and confirmed.

The minutes of the special meeting of April 26th were read. Some discussion arose as to whether or not these minutes should be confirmed. On motion, it was finally decided to hear the minutes of the meeting of April 29th first, before taking action upon this. The minutes of the meeting of April 29th were read. Dr. Buist suggested that these be changed so as to bring out the fact that the President had called the meeting of April 29th as he felt there might be some question about the legality of the previous special meeting. It was moved, seconded and carried that the minutes be confirmed with this correction. It was moved, seconded and carried that the minutes of April 29th be confirmed.

The Secretary read the application of Dr. Jenkins M. Pope, of Edisto Island, properly endorsed, and containing the initiation fee. This was referred to the Board of Censors.

The Secretary read the following letter from the Mayor of the City of Charleston:

CITY OF CHARLESTON
Executive Department

May 2, 1930

Dr. W. Atmar Smith, Secretary
Medical Society of South Carolina
72 Society Street
Charleston, S. C.
Dear Dr. Smith

I wi h to acknowledge receipt of your communication of April 20th. I will be very glad to sign the memorandum of agreement, as soon as I obtain the consent of the donors.

Yours very truly,
(s) Thos. P. Stoney
Mayor

The Secretary read a letter addressed to the President, from Margaret Sanger, Chairman of the National Committee on Federal Legislation for Birth Control. This letter also contained a copy of the bill which will be introduced into Congress to amend the penal laws concerning birth control. It was moved, seconded and carried that this letter be received as information.

Dr. J. S. Rhame, Chairman of the delegates to the State Medical Association, made an informal report. He stated that the delegates had taken up the various matters which the Society had directed them to do. The resolution in regard to the bill to allow hospitals of the state to have the right to hold autopsies on such charity patients in their institutions who may die, was carried. The changes in the constitution and by-laws of the State Medical Association were all adopted, except that concerning the Speaker of the House of Delegates. It was decided by the State Association that this change be not made at present. The Veterans' Bureau Hospital matter had already been acted upon, and there was no further action by this Society necessary. He stated that the Association had decided to meet next year at Greenville, after having received invitations from Horry and Richland also. Dr. K. M Lynch, a member of this Society, was unanimously elected president of the State Association for the current year, and Dr. Charles R. Mobley, of Orangeburg, was elected President-Elect. Dr. E. A. Hines, of Seneca, and Dr. J. H. Cannon, of Charleston, were elected delegates to the American Medical Association.

The President announced that he had received an invitation to represent this Society at the 126th Anniversary Meeting of the Medical Society of Chatham County, at Savannah, Georgia.

Dr. L. S. Hay was present, and signed the constitution.

The Scientific Meeting was called at 9:00 P. M.

A short symposium on the Injection Treatment of Varicose Veins was first taken up. Dr. W. H. Prioleau opened the discussion by giving a brief history outlining the technique, and reporting results of the treatment. Dr. T. E. Bowers discussed the advangtaes and disadvantages of this method of treatment, and reported results of his experience in seven cases.

Dr. B. R. Baker next presented a moving picture demonstration of the use of Sodium Amytol as a general anesthetic. He also discussed indications and contra-indications for the use of this drug. This was discussed by Drs. de Saussure, Bowers, Beckman, Bœtte and A. E. Baker, Sr., Dr. B. R. Baker closing.

There being no further business, the meeting adjourned.

W. A. Smith, M. D.
Secretary

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL, TUESDAY EVENING, MAY 27TH, 1930, AT 8:30 O'CLOCK

The meeting was called to order by the President, Dr. J. Sumter Rhame.

Present:

Doctors: Allen; Banov; Beach; Bowers; Burn; Byrnes; Cain; Chamberlain; de Saussure; Jackson; Lynch; Mitchell; O'Driscoll; Palmer; Pearlstine; F. R. Price; W. H. Price; Prioleau; Ravenel; Rhame; Richards; Rutledge; J. E. Smith; W. A. Smith; Townsend; Sughrue.

Guests: Captain Edgar Thompson, of the U. S. Navy

The minutes of the meeting of May 13th were read and confirmed.

The Secretary presented the application of Dr. Jenkins M. Pope, of Edisto Island, which had been reported on favorably by the Board of Censors, for membership in the Society. Ballots were taken and Dr. Pope was unanimously elected. The President declared Dr. Pope a member of this Society, and instructed the Secretary to notify him to be present at the next meeting in order to sign the constitution.

The President instructed the Secretary to read the following resolutions, which were passed by the House of Delegates of the South Carolina Medical Association on May 6th, 1930:

RESOLUTIONS

1. That each component County Medical Society making up the South Carolina Medical Association be instructed to appoint or elect a COMMITTEE ON PUBLIC HEALTH, whose duty it shall be to supervise and cooperate with any and all agencies doing work of a preventive or public health nature in its County.
2. That the Health Officer in each County employing a complete health unit, make a written report of his activities to the Medical Society of the County in which he is working, once each month or when such report is made to the State Board of Health, and that the Medical Society cooperate with him in his work through its COMMITTEE ON PUBLIC HEALTH.
3. That any nurse or public health worker employed in a County that has no Health Officer or physician at the head of its health department, be responsible to and work under the supervision and direction of the

COMMITTEE ON PUBLIC HEALTH of the Medical Society of the County in which he or she is employed.
4. That the State Board of Health, Bureau of Infant and Maternal Welfare, and all other agencies holding clinics of any and all kinds, be requested not to conduct any clinic in any County of the State, except with the consent and at the invitation of the Medical Society of the County in which the clinic is to be held and that the members of the Medical Society be asked to participate in any clinic held in its county.
5. That all prophylactic vaccinations, innoculations, and administrations of serums, vaccines, antitoxins, etc., be given by a regularly licensed and practicing physician, although distributed by the State Board of Health, and that no Health Officer administer such biologicals in "wholesale" numbers until careful investigation has been made as to the ability of those taking such biologicals to pay for the administration of the same. (Filed under South Carolina Medical Association.)

It was moved, seconded and carried that this be received as information, and spread on the minutes.

The Scientific Program was called at 9:00 P. M.

The program consisted of a clinical pathological conference. Dr. M. W. Beach read the history, physical findings and laboratory work that had been done on the case. The diagnosis of serous membrane tuberculosis had been made. This was discussed by Drs. I. R. Wilson, Edward Rutledge, W. A. Smith, K. M. Lynch, and others. Dr. Lynch presented the pathological findings, which showed the patient had died of syphilis of the liver and kidneys.

There being no further business, the meeting adjourned.

W. A. Smith, M. D.
Secretary

REGULAR MONTHLY MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY, HELD IN THE LECTURE HALL, CITY HOSPITAL MONDAY, MAY 5TH, 1930.

The meeting was called to order at 8:00 P. M. by the President, Dr. Guess, with about 25 members present.

The minutes of the last meeting were read and approved.

Reports of clinical cases were then called for. Dr. Sanders reported a case of otitis media, which came back to him later with mastoid symptoms. Operation revealed extensive mastoid involvement. Recovery was uneventful.

Dr. Grimball reported an interesting case of ivy poisoning with constitutional symptoms. Poison Ivy Extract (Mulford) was used with apparent good results. Discussed by Dr. Guess.

Dr. W. T. Brockman reported an unusual case of mucous polyps in the rectum of a negro boy.

Dr. George T. Tyler, Jr. was then called upon who presented a very informing paper on "Some Problems in Surgery with Case Histories."

The first case reported was one of typhoid fever superimposed upon thyrotoxicosis with exophthalmia.

The second was one of hyperthyroilism.

The next two cases were one of paroxysmal tachycardia and thyroid deficiency caused by a cystic thyroid.

Dr. Tyler then mentioned Crile's views, whether or not we are stressing metabolic tests too much.

Following the presentation of these interesting cases, Dr. Hugh Smith discussed the paper; discussion was closed by Dr. Tyler.

The Treasurer reported that only 74 members had paid their dues for 1930. Dr. Brown moved that the Treasury advance the money to cover the amount for 80 members if they should pledge re-imbursement; seconded by Dr. Tyler. Discussed by Dr. Hugh Smith and Guess; and carried.

Dr. Grimball moved that the summer meetings of the Society be held at 8:30 P. M. instead of 8:00 P. M.; seconded and carried.

By unanimuos vote Dr. J. W. Curry's transfer from the Floyd County (Georgia) Medical Society was effected.

There being no further business, the meeting adjourned.

Irving S. Barksdale, M. D.
Secretary

LAURENS COUNTY MEDICAL SOCIETY

The Laurens County Medical Society passed the following resolutions on the death of Dr. Ferguson which occurred January 5th., 1930.

WHEREAS: Dr. Wm. D. Ferguson who was a life long member and several times President of this Society and having been so prominent in the business and social life as well as professional phase, Be It Therefore Resolved, we can but accept the rulings of an unkind Fate and sincerely deplore his passing, really in the prime of life.

The profession and community has lost a friend and useful member. Dr. Ferguson was a strong supporter of organized medicine, was well known not only in South Carolina but in North Carolina and Virginia. Was greatly admired for his wisdom, philosophy and happy presence. He was splendidly informed, very popular and highly entertaining.

We further resolve that we dedicate a page of our record to his memory and publish these resolutions in the South Carolina Medical Journal and send copy to his family.

Rolfe E. Hughes, M. D.
T. L. W. Bailey, M. D.
Jesse H. Teague, M. D.

SPARTANBURG COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Spartanburg County Medical Society was held April 28th, in the dining room of the General Hospital at 8 P. M. About thirty members were present.

Dr. J. Warren White of Greenville showed a very interesting moving picture film illustrating problems and end results in some orthopedic cases.

Dr. George Thompson showed a case of Parkinson's syndrone.

Dr. F. H. Sanders presented a case of diffuse glomerular nephritis which apparently came on following an injury to the spine and kidneys.

Dr. Martin Crook reported some of the interesting features of the Eye, Nose and Throat Assembly, recently held at Roanoke, Va., and also exhibited an eye ball which showed calcification of the chorroid coat. X-ray films taken of the eye showed that the chorroid coat consisted of cancellous bone.

Dr. D. L. Smith made the following motion: That the County Medical Society deem it wise or advisable that the present amount of money appropriated by the City of Spartanburg for throat cultures and other bacteriological work be given to the Clinical Laboratory of the General Hospital instead of being spent in hiring a city bacteriologist. The motion was seconded and carried.

There being no further business the Society was adjourned.

C. W. Bailey, Pres.
W. M. Sheridan, Sec.

SPARTANBURG COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Spartanburg County Medical Society was held Monday, May 26, 1930, at 8:00 P. M. at the Spartanburg General Hospital. About thirty members were present.

Dr. James M. Northington talked on "Medicine As A Livelihood." Dr. Northington stressed the need of a garnishment law in South Carolina.

Dr. Addison G. Brenizer showed some lantern slides illustrating the proper types of operations for gastric ulcer and duodenal ulcer and he emphasized duodenojujeunostomy.

Dr. Boyd moved that the dues for 1930 be increased from seven dollars to ten dollars per year. Dr. Sanders moved that members be assessed a small amount in the near future to take care of any deficit that might occur this year.

There being no further business, the meeting adjourned.

W. M. Sheridan, M. D., Secy.
Spartanburg County Medical Society
Spartanburg, South Carolina

CHESTER COUNTY MEDICAL SOCIETY

WILLIAM BROWN COX

In the passing of Dr. William Brown Cox on Dec. 21, 1929, the Chester County Medical Society lost one of its oldest and most faithful members and the city of Chester and Chester County a useful citizen, a loyal friend, and a wise councillor.

Dr. Cox was a Chester County man, having been born at Landsford in the eastern part of the county. His father was a doctor of the old school and from him by inheritance and association he attained many of the traits that were so attractive in the old family physician.

From the hectic days of '76 on through the last presidential campaign Dr. Cox took a deep interest in state and national politics. He kept well informed on all political issues by extensive reading although he never sought political preferment for himself.

His literary education was obtained at the private schools of Chester and York counties and at Wofford college. He graduated in medicine at the Atlanta Medical College which is now the Medical Department of Emory University. He did post graduate work in New Orleans and New York in his chosen specialty of gastronterology. His first practice was at Landsford with his father, later moving to Chester in 1899.

He was twice married, first to Miss Willie Cross, of Chester, S. C., to whom was born two sons and in 1909 to Miss Leila DeVage of Chester.

During the war he served his county faithfully and well as the Medical member of the Exemption Board. He was one of the founders of the Chester Sanitorium and at the time of his death and for several years prior to this he served as president.

The Chester County Medical Society devotes a page of its official records to his memory and directs the Secretary to extend the Society's sympathy to each of his sons.

Dr. J. P. Young
Dr. W. R. Wallace
Committee.

COLUMBIA MEDICAL SOCIETY

Columbia, S. C.

Medical Society Hall **Monday, May 12, 1930**

8:30 P. M.

REGULAR SCIENTIFIC MEETING

PROGRAM

1. A Study that we may have a more thorough understanding in handling the Injured.
Samuel E. Harmon, M. D.
Discussion opened by Drs. Guerry and Baggott.
2. Gall Bladder Diagnosis: T. A. Pitts, M. D.
Discussion opened by H. W. Rice, M. D.

J. H. Gibbes, M. D., President
William Weston, Jr,. M. D., Secretary

WOMAN'S AUXILIARY
South Carolina Medical Association

OFFICERS

President, Mrs. W. H. Nardin ..... Anderson
First Vice-President, Mrs. L. O. Mauldin ..... Greenville
Second Vice-President, Mrs. Carl B. Epps ..... Sumter
Recording Secretary, Mrs. C. W. Evatt ..... Greenville
Corresponding Secretary, Mrs. T. R. Gaines ..... Anderson
Treasurer, Mrs. J. W. Bell ..... Walhalla

COMMITTEE CHAIRMEN

Publicity, Mrs. W. C. Abel ..... Columbia
Extension, Mrs. William Boyd ..... Columbia
Historical, Mrs. H. M. Stuckey ..... Sumter
Hygeia, Mrs. J. R. Miller ..... Rock Hill
Legislative, Mrs. M. L. Parler ..... Wedgefield

COUNSELLORS

District 1. Mrs. W. W. Wild ..... North Charleston
District 2. Mrs. Ernest Cooper, ... State Park, Columbia
District 3.
District 4. Mrs. F. G. James ..... Geer
District5 .Mrs. A. W. Humphries ..... Camden
District 6.
District 7. Mrs. D. O. Winter ..... Sumter
District 8.

The last bill against the Sims' Memorial Fund having been presented to me on May 20th. 1930, I offer, at this my earliest opportunity thereafter, my completed financial report—together with the statement of a certified Public Accountant, whose services I though it proper to employ. The list of disbursements does not cover the entire cost of erecting the Sims Memorial. All the expenses of the Publicity Campaign—printing, typing, etc., and all postage, including the sending of the Treasurer's receipts for contributions, were borne by the Auxiliary to the South Carolina Medical Association. The Auxiliary was unwilling to use a cent of its treasured Fund until sure that the amount necessary for the actual monument was assured. From April 1926 when the project was begun, until June 1928 when the goal was in sight, the Aux. paid from its own treasury all the costs of collecting the Fund—a sum, doubtless, quite equal to the balance now in bank awaiting disposition by the Sims' Memorial Committee.

Mrs. Wm. A. Boyd,
Treas. Sims' Memorial Com.

Columbia, S. C.,
June 3rd, 1930.

Total amount collected from individuals and organizations, with accruing interest, at closing of campaign Jan. 1st. 1929 (previously published in detail)	$ 3361.61
Matching sum as per appropriation from the State of South Carolina	3361.61
Contribution from American Legion Auxiliary Columbia Unit	5.00
From D. O. L. Miller, Charlotte, N. C.	10.00
From Mrs. Donald McQueen, Columbia	1.00
Interest on diminished balances—Jan. 1929 to May 1930	110.83
Total amount from all sources	$ 6850.05
Itemized Disbursements—to Edmond Quinn, Sculptor For—Bust in Bronze and packing and shipping same	$ 1650.00
Expenses trip to Columbia	85.00
To Harold Steiner, Architect. For—Designs, blue prints, photographs and bronze letters	483.00
To Consolidated Granite Co., Columbia For—Granite Memorial	4000.00
Bronze and cut letters not included in contract	97.00
To Blanchard's Studio, Columbia for—Photographs of Capitol Grounds for Architect's use	6.00
To George E. Lafaye, Supervising Architect	80.00
To Woman's Auxiliary to S. C. M. A. Reimbursement —packing and shipping Sims Plaster bust to Sculptor	5.73
To Osteen Publishing Co., Sumter. For 500 Invitations to unveiling exercises — sixty-five dollars "less contributions" of 12	53.86
To James Henry Rice, Jr., Unveiling Speaker. For—trip expenses	25.00
To R. C. Williams & Sons, Columbia. For—rent 25 chairs Unveiling Exer.	2.50
To Mrs. H. M. Stuckey, Chair. Memorial Com. Clerical expenses — May 1st., 1928 to May 29th., 1929	37.00
To Carolina Engraving Co. Columbia. For — four "Copper half tones" and special delivery postage on 2 of them	33.66
To J. A. Sargeant, Colum-	

bia. For—1 photograph of Sims Memorial	1.00	
To The State Company, Columbia. For—all items in publishing 200 Souvenir Booklets	141.90	
200 envelopes for same	4.00	
To Emmett Conniffee, Columbia. For engraving Die for Booklet Cover design	28.00	
To Dr. J. H. Taylor, Chair. for Souvenir Booklet. For postage on Booklets	12.00	
Reimbursement — C. O. D. telegram from Sculptor	1.91	
To Gooding Audit Co., Columbia. For auditing records	12.50	
Total Disbursements		6,760.06
Balance in Bank		$ 89.99

We have examined the records from which the above statement is taken. We find the receipts to agree with the Bank deposits and find all disbursements accounted for by satisfactory vouchers.

Gooding Audit Company,
By H. E. Gooding, C. P. A.

Columbia, S. C.,
June 2nd., 1930.

MINUTES

MINUTES

EIGHTY-SECOND ANNUAL SESSION

The South Carolina Medical Association Florenec, S. C.

May 6, 7, 8, 1930

The South Carolina Medical Association met in the assembly hall in the public library building, Florence, on Wednesday, May 7, 1930, in general session, and was called to order at 9:30 a. m., by Dr. F. H. McLeod General Chairman of Committees on Arrangements.

The invocation was said by the Reverend H. Tucker Graham, pastor of the Presbyterian church, Florence.

After making several announcements in regard to the program of entertainments, etc., Chairman McLeod turned the gavel of the Association over to Dr. Charles R. May, President.

Address of Welcome
W. R. Mead, M. D., Florence

Mr. President and members of the South Carolina Medical Association: I simply want to say for the citizens of Florence that nothing has happened in recent years that gives us greater pleasure than to have the South Carolina Medical Association meet with us for two days. Speaking for the Florence County Medical Association, let me say that we have long looked forward to having you here at this time and have made extensive preparations for you, and our pleasure in having you here is only equaled by our desire to have this convention prove successful .

Response to Address of Welcome
C. B. Earle, M. D., Greenville

Mr. President: On behalf of the State Medical Association, Dr. Mead and the citizens of Florence, we accept your welcome. We have been to Florence before; in fact, I think it has become a habit of the State Medical Association to come to Florence. In playing the game perfectly fair, I think you should be warned, sir, if you do not wish the State Medical Association to come again to Florence, don't ask for it. A few years ago a motion was made to have the State Association meet each year in some central place, but that was voted down. I think if a motion were made this morning to meet annually in Florence it would pass unanimously.

On behalf of the State Association I thank you for your cordial welcome. We are going to enjoy our stay, and when we leave I hope it will be after such an impression that we shall be invited to come again, and if we are invited I am sure we shall accept the invitation.

PRESIDENT MAY: The South Carolina Medical Association could have elevated no man to its presidency more appreciative than I am of this high and conspicuous honor. The wisdom of your choice has never been apparent to me, but I have done the best I could, and I am thankful for the experience. The kindly manner in which I have been received on my visits throughout the state has been very pleasing to me and has left impressions which can never be effaced.

Dr. May read his President's Address.

PRESIDENT MAY: Gentlemen, we are delighted to have with us as guests this morning Dr. William Guerry Morgan, President-Elect of the American Medical Association, and Mr. C. P. Loranz, of Birmingham, who is Secretary-Treasurer of the Southern Medical Association. We are glad to have them with us and hope they will take part in the proceedings.

Dr. J. R. Young, Anderson, read a paper entitled "A new physical sign in pulmonary embolism," which was discussed by Drs. Geo. R. Wilkinson, Greenville, and J. Heyward Gibbes, Columbia, and by Dr. Young in closing.

Dr. J. Heyward Gibbes, Columbia, read a paper

entitled "Is the agglutination test for undulant fever significant of the disease?", which was discussed by Drs. E. A. Hines, Seneca; H. M. Smith, Columbia; M. H. Wyman, Columbia; and Geo. R. Wilkinson, Greenville; and in closing by Dr. Gibbes.

The paper of Dr. William Weston, Jr., Columbia, entitled "Cyanosis in Infants," was read by Dr. William Weston, Sr., and was discussed by Dr. Joseph I. Waring, Charleston.

Dr. William H. Prioleau, Charleston, read a paper entitled "Adenoma of the thyroid gland—clinical significance," which was discussed by Drs. J. H. Cannon, Charleston; G. T. Tyler, Jr., Greenville; Willard C. Hearin, Greenville; and Roger G. Doughty, Columbia; and in closing by Dr. Prioleau.

Dr. F. Eugene Zemp, Columbia, read a paper entitled "Effects of pregnancy on tetania parathyroid-prævia," which was discussed by Drs. LeGrand Guerry, Columbia; Roger G. Doughty, Columbia; William Weston, Columbia; and O. B. Mayer, Columbia; and in closing by Dr. Zemp.

The program providing for an address by Dr. William Guerry Morgan, President-Elect of the American Medical Association, as a special order at twelve noon, and this hour having arrived, President May called on Dr. William Weston, of Columbia, to introduce Dr. Morgan.

DR. WESTON: This is a very unusual occasion today, because it is not often our privilege at a meeting of the South Carolina Medical Association to have with us a man who has been stamped with the highest approval of leadership in his profession, such as is the occasion today. It is necessary, for a man to rise to this distinction, to possess unusual qualities, not only of leadership but of learning in some particular field of endeavor. These our guest possesses in an unusual degree. It has been my privilege to have seen something of him in the Council of the Southern Medica l Association, where he has manifested certain traits of character that stamp him for leadership. Quick and correct decision, a high degree of learning in his particular field of endeavor, humility, modesty, if you will, a pleasing and delightful personality—all these qualities, my friends, our distinguished leader possesses. And it gives me great pleasure to present to you Dr. William Guerry Morgan, President-Elect of the American Medical Association, who exemplifies all these qualities.

DR. WILLIAM GUERRY MORGAN: President May, Dr. Weston, and members of the South Carolina Medical Association: I appreciate the introduction which has been given me. I feel just a little bit like the boy who was sitting beside his mother at the funeral of his father. Perhaps the story is familiar to you. The preacher, feeling it necessary to say a great deal in favor of this man, inasmuch as during his life nothing much could be said good about him, went into what a wonderful father and citizen he was. The little boy turned to his mother and said: "Mother, whom is the minister talking about?" The mother replied: "Why, your father, son." "Damned if the preacher knew pa." (Laughter.)

The title of my paper is "Chronic Gastritis," but I am not going to consider the ordinary types of gastritis, with which you are all familiar and which you see daily in your practice; I am going to consider the rarer forms, chiefly linitis plastica and leather-bottle stomach.

Dr. Morgan read his address on "Chronic gastritis."

PRESIDENT MAY: Gentlemen, the South Carolina Medical Association feels delighted and honored to have Dr. Morgan with us. I know we all enjoyed his splendid paper, and I ask for a rising vote of thanks and appreciation.

A rising vote of thanks was given Dr. Morgan.

Dr. G. P. Neel, Greenwood, presented a paper entitled "The Treatment of Burns," which was discussed by Dr. M. H. Wyman, Columbia, and in closing by Dr. Neel.

After several announcements, the Association adjourned at 12:50 p. m., to meet again at 3:00 o'clock.

AFTERNOON SESSION

The South Carolina Medical Association met at 3:15 p. m., with Dr. G. P. Neel, First Vice-President, presiding.

Dr. Robert Taft, Charleston, showed a moving picture entitled "The rœntgen examination of the gastro-intestinal tract." This subject was discussed by Drs. P. D. Hay, Jr., Florence, and Thomas A. Pitts, Columbia.

Dr. Barnie H. Baker, Charleston, read a paper entitled "Sodium isoamyethyl barbiturate as a general anesthetic," illustrated by moving pictures, which was discussed by Drs. Douglas Jennings, Bennettsville; John F. Townsend, Charleston; Olin B. Chamberlain, Charleston; LeGrand Guerry, Columbia; Milton Weinberg, Sumter; George H. Bunch, Columbia; and Roger G. Doughty, Columbia.

Dr. T. M. Davis, Greenville, read a paper on "Resection of prostate gland obstructions," which was discussed by Drs. Wilton Weinberg, Sumter; Hugh Wyman, Columbia; L. P. Thackston, Orangeburg; Thomas Brockman, Greer; and Hugh Smith, Greenville; and in closing by Dr. Davis.

Dr. J. I. Waring, Charleston, read a paper entitled "Vitamin B feeding of infants," which was discussed by Drs. Norma P. Dunning, Rock Hill; and Roe E. Remington, Charleston; and in closing by Dr. Waring.

Dr. Julian P. Price, Florence, read a paper entitled "Epidemic meningitis, with especial regard to treatment," which was discussed by Drs. J. I. Waring, Charleston; D. LeSesne Smith, Spartanburg; G. C. Bolin, Orangeburg; and Thomas Brockman, Greer; n n closing by Dr. Price.

Dr. E. E. Herlong, Rock Hill, read a paper on "Polycystic Disease of the kidneys," which was discussed by Drs. Norma P. Dunning, Rock Hill, and Hugh Wyman, Columbia; and by Dr. Herlong in closing.

Dr. Douglas Jennings, Bennettsville, read a paper entitled "Coronary Thrombosis simulating surgical abdominal accidents," which was discussed by Drs. W R. Mead, Florence; Robert Wilson, Charleston; John F. Townsend, Charleston; Hugh Smith, Greenville; and Raymond Price, Charleston; and by Dr. Jennings in closing.

Dr. R. J. Coney, Cheraw, read a paper entitled "Myocardial failure," which was discussed by Drs. W. R. Mead, of Florence, and T. R. Littlejohn, of Sumter; and in closing by Dr. Coney.

The Association then adjourned, to meet on Thursday morning at 9:00 o'clock.

Thursday, May 8

The Association met and was called to order at 9:25 a. m. by the President, Dr. May.

Dr. Thomas D. Dotterer, Columbia, read a paper entitled "Infant mortality in South Carolina," which was discussed by Drs. Ben F. Wyman, Columbia, and D. LeSesne Smith, Spartanburg.

Dr. John F. Townsend, Charleston, presented a paper entitled "The growth of the ear and its relation to disease," which was discussed by Drs. M. R. Mobley, Florence; E. W. Carpenter, Greenville; and L. O. Mauldin, Greenville.

Dr. Julius H. Taylor, Columbia, read a paper entitled "Acute intestinal obstruction and its management," which was discsused by Drs. S. E. Harmon, Columbia; C. B. Earle, Greenville; F. H. McLeod, Florence; Douglas Jennings, Bennettsville; and E. A. Parks, Baltimore, Md.; and by Dr. Taylor in closing.

The President called on Dr. F.H. McLeod, Florence, to present the next speaker, Dr. E. A. Park, of Johns Hopkins Hospital, Baltimore, Md.

Dr. F. H. McLeod: The South Carolina Medical Association has always been fortunate in having distinguished men appear on its program. The speaker whom we shall hear next is from Johns Hopkins. The name "John Hopkins" has always carried a charm to medical men. I do not know who the trustees of Johns Hopkins were that selected the name, but they selected well, because they gave that institution a prestige which has continued to this day. The speaker whom I am going to introduce to you is a pediatrician in this institution and has a record of distinguished service. I am glad to present to you Dr. E. A. Park, of Johns Hopkins Hospital, Baltimore, Md.

Dr. E. A. Park, Johns Hopkins Hospital, Baltimore, Md., presented a paper on "Tuberculosis in infants."

At the suggestion of the President, a rising vote of thanks was given Dr. Park.

Dr. George R. Wilkinson, Greenville, presented a paper entitled "The diagnosis of tuberculosis."

The President asked Dr. Hugh Smith, of Greenville, to introduce Dr. W. Pinckney Herbert, the next speaker.

Dr. Hugh Smith: Gentlemen, we feel deeply indebted to Dr. Herbert for coming down today and joining in this program of our State Association. Asheville, for many years, through the magnificent work done by Minor and Dunn and others, has been a teaching center in tuberculosis. Dr. Herbert has been a pioneer in doing surgical work in tuberculosis, and for this reason we have asked him to come down today and talk to us about surgical measures for pulmonary tuberculosis. Dr. Herbert, I might say, is a distinguished member of the American Institute of Intrathoracic Surgeons. I present Dr. W. Pinckney Herbert, of Asheville, N. C.

Dr. W. Pinckney Herbert, Asheville, N. C., read a paper entitled "Surgical measures for pulmonary tuberculosis."

The Association then adjourned at 1:10 p. m. to meet again at 3:00 o'clock.

Afternoon Session

The Assiocation met at 3:10 p. m. with President May in the chair.

Dr. Ernest Cooper, State Park, read a paper entitled "Treatment of pulmonary tuberculosis."

The papers constituting the symposium on tuberculosis were discussed by Dr. Leo F. Hall, Columbia ,and by Dr. Cooper in closing.

Dr. I. H. Grimbal, Greenville, read a paper entitled "Bronchosinusitic diseases in children." and Dr. P. V. Mikell, Columbia, read a paper on "Diagnosis and treatment of sinus infection." These papers were discussed by Drs. J. W. Jervey, Jr., of Greenville; M. R. Mobley, Florence, E. W. Carpenter, G'ville and Norma P. Dunning, Rock Hill; and in closing by Drs. Grimball and Mikell.

Dr. Roe E. Remington, Charleston, spoke on the relation of the South Carolina Food Research Laboratory to the South Carolina Medical Association. The work of the Food Research Laboratory was discussed by Dr. E. A. Park, Baltimore, Md., and Dr. Remington closed the discussion.

Mr. President and Gentlemen of the House of Delegates:

Your Committee on Medical Economics begs to submit this report, asking that you keep in mind that a committee with our duties has not heretofore been appointed by this Association, that we have no previous report to amend or addend, and that this work is begun at a time when there is great agitation in economic affairs. We have considered two phases of the economic question, first, the encroachment of public practice on curative medicine, and second, the abuse of charity practice.

Just now the medical profession needs to protect itself against certain hostile influences. There are numbers of changes coming about in our civilization in the South which vitally affect the future of the practice of medicine as a science, an art, and a commercial or professional engagement. The science and art of medicine have made tremendous strides but the organizational or commercial side of medicine has been allowed to lag.

While it is very evident that the activities of the public health agencies have advanced beyond preventive medicine and health education and are slowly but steadily entering the field of curative medicine, the blame for this state of affairs cannot be placed wholly on the public health agencies. The medical profession in partly responsible in that there are yet quite a few is our ranks who refuse to take an active part in matters pertaining to preventive medicine, and we have, therefore, failed to assume for organized medicine its rightful

place as the leader in all things which pertain to the health of the public sick or well.

Before we can insist upon the direction of all medical and health matters, we must, as an organization, prove our capability and willingness to do so, and we must carefully avoid any semblance of commercialism replacing that altruism which belongs alone to the medical profession. Your Committee believes it possible to so coordinate the work of the public health agencies and the family physician, giving the latter an active part in preventive medical work, as to make of each County Medical Society a local County Board of Health; and we believe further that steps should be taken to make the County Medical Societies feel their responsibilities as guardians of the public health. When this is done all public health work will naturally look to the Medical Society in the community for direction and leadership. To this end we respectfully recommend:

(1) That each component County Medical Society making up the South Carolina Medical Association be instructed to appoint or elect a COMMITTEE ON PUBLIC HEALTH, whose duty it shall be to supervise and cooperate with any and all agencies doing work of a preventive or public health nature in its County.

(2) That the Health Officer in each County employing a complete health unit, make a written report of his activities to the Medical Society of the County in which he is working, once each month or when such report is made to the State Board of Health, and that the Medical Society cooperate with him in his work through its COMMITTEE ON PUBLIC HEALTH.

(3) That any nurse or public health worker employed in a County that has no public health officer or physician at the head of its health department, be responsible to and work under the supervision and direction of the COMMITTEE ON PUBLIC HEALTH of the Medical Society of the County in which he or she is employed.

(4) That the State Board of Health, Bureau of Infant and Maternal Welfare, and all other agencies holding clinics of any and all kinds, be requested not to conduct any clinic in any County of the State, except with the consent and at the invitation of the Medical Society of the County in which the clinic is to be held and that the members of the Medical Society be asked to participate in any clinic held in its County.

(5) That all prophylactic vaccinations, inoculations and administrations of serums, vaccines, antitoxins, etc., be given by a regularly licensed and practicing physician, although distributed by the State Board of Health, and that no Health Officer administer such biologicals in "wholesale" numbers until careful investigation has been made as to the ability of those taking such biologicals to pay for the administration of the same.

(6) That each County Medical Society be urged to release to the press for publication such written matter concerning preventive medicine, public health measures, the control of disease, the prevention of accidents, and medical articles dealing with the subjects in which the public is interested; such articles to be written by a member or members of the Medical Society, to be reviewed by the County Medical Society, and to appear over the signature of the County Medical Society and not the individual writer. (We herewith apologize to the COMMITTEE ON PUBLIC HEALTH AND INSTRUCTION for this recommendation, but we believe that this is an economic question, since in this way the Medical Society can ethically increase the work of its members and can assume its rightful position in the community as the adviser to the public in all things medical).

In endeavoring to make recommendations as to the abuse of charity practice, we realize that the willingness to offer our services to those who cannot afford to pay has always been a splendid and inspiring part of medical practice. Your Committee has no intention of dictating to the individual practitioner as to the exercise of this humane and highly credible service, however, we wish to draw attention very sharply to the widespread and highly unfair point of view which the organizers. of many philanthropic and community projects have adopted. We refer to the building of splendid hospitals and clinics well equipped with material facilities for patients who may or may not be rightful objects of charity—with no provision for the compensation of physicians who must give their professional talents and time. We wish to insist upon the often forgotten facts that hospitals and clinics are in themselves only the material setting for the attending medical staff. It seems to us as an unassailable fact that no more cogent economic or humanitation reason can be advanced for the free service of the physicians connected with the institutions than for unpaid efforts on the part of the architects who design them, the contractors who build them or the supply and drug houses who furnish them. Therefore, it is recommended by your Committee:

(1) That when the members of the South Carolina Medical Association are required to furnish their services to community or endowed hospitals or clinics, they should endeavor to have a reasonable remuneration arranged.

(2) That the decision as to whether a case attended in such a hospital or clinic is a rightful object of charity be left in the hands of the attending physician, rather than lay organizations or individuals.

Respectfully,

Committee on Medical Economics,
Douglas Jennings, M. D., *Chm.*
Olin B. Chamberlain, M. D.
Robert E. Abel, M. D.
T. R. Littlejohn, M. D.

MARION COUNTY MEDICAL SOCIETY HOLDS SESSION

The Marion County Medical Society met on Wednesday evening, March 19, 1930, with the following answering roll call:

Drs. E. M. Dribble, D. W. Green, F. L. Martin, J. L. Martin, L. M. McMillian, B. M. Montgomery, J. C. Moore, N. N. Schofield, J. G. Stanley, R. B. Stith, and H. B. Webb.

Guests of the Society were:

Dr. L. F. Hall, of Columbia and State Park; Drs. J. P. Price and M. R. Mobley, of Florence; Drs. H. B. Holmes and Paul E. Sasser, of Conway.

After dining at the Hotel Marion, the members and their guests adjourned to the City Hall where the following program was rendered:

1. "Some Phases of Tuberculosis from a Diagnostic Standpoint."—by Dr. L. F. Hall.

2. "The Diagnosis of Tuberculosis in Young Children."—by Dr. J. P. Price.

Dr. M. R. Mobley, Councilor Sixth District, South Carolina Medical Association, discussed preparations now under way for the Annual Session of the State Association in Florence May 6, 7, and 8, 1930.

It was a quite definite pleasure to have with us on this occasion Dr. H. K. Jenkins, until recently a fellow practitioner and member of the Marion County Medical Society. Dr. Jenkins leaves within the very near future for the Phillipine Islands where he will be engaged in the medical service of the Episcopal Mission Board.

B. M. Montgomery,
Secretary.

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EDITORIAL

COMMENTS ON A. M. A. AT DETROIT

One of the greatest meetings of the American Medical Association was held at Detroit, June 23-27. The attendance exceeded five thousand. South Carolina had a fair representation, some of whom were as follows: Drs. Barnie R. Baker, Charleston, Walter R. Mead, Florence, J. Warren White, Greenville, Thos. Brockman, Greer, W. S. Gamble, Sr., Kingstree, F. M. Routh, Columbia, Lester A. Wilson, Charleston, A. R. Fike, Spartanburg, E. A. Hines, Seneca, J. H. Cannon, Charleston, Kenneth Lynch, Charleston, William Weston, Columbia, J. W. Jervey, Greenville.

The South Carolina profession came in for high honors on various programs. Dr. William Weston was the able Chairman of the Section on Diseases of Children. Dr. Lester A. Wilson, Professor of Obstetrics at the Medical College read a paper on, "Pregnancy and Labor Complicated by Granuloma Inguinale. (Lantern Demonstration)." Dr. Kenneth M. Lynch opened the discussion on the paper by Dr. J. V. Barrow of Los Angeles on "Characteristics and Pathology of Human Intestinal Protozoa. (Motion Picture Demonstration)." Drs. Robert B. Taft and J. P. Palmer, Jr., of Charleston read an important paper on, "Spontaneous Pneumothorax (Lantern Demonstration)."

The scientific exhibits surpassed anything ever hitherto attempted. Drs. Roe E. Remington and William Weston had a very creditable exhibit on the research work carried on at the Medical College at Charleston in the domain of mineral elements in foods.

In the House of Delegates a vast amount of business was transacted. Much of the discussion hinged on the economic condition of the profession and the problems connected therewith. The membership continues to increase and is only a little short now of one hundred thousand. South Carolina was credited with a paid up membership of 823, and of this number 379 are Fellows, which means that about half of the members of the State Medical Association subscribe to the Journal of the American

Medical Association. There are thirteen hundred and three doctors in South Carolina, a gradually decreasing number in recent years. This report indicates that there are still some physicians who are not on the rolls of the county medical societies. Drs. E. A. Hines and J. H. Cannon represented the South Carolina Medical Association in the House of Delegates. Dr. Hines was appointed on the Reference Committee of Rules and Order of Business.

Perhaps the most significant advance of the Detroit meeting was the follow up of the discussions all over the country culminating in the House of Delegates by the authorization of a Bureau of Medical Economics. Such a Bureau, properly launched, should prove to be one of the most important Bureaus of the entire Association. There is no doubt about it, the American doctor is face to face with an epoch in social medicine and he needs expert guidance to find the way out.

The President Elect for the next year, Dr. David Starr Judd of the great Mayo Clinic, is a surgeon of international fame and is well known to most South Carolina doctors. The next place of meeting will be Philadelphia. This will be good news to the profession of this State inasmuch as Philadelphia has always been an attractive medical center and easy of access from this section of the country.

A more extended report on the Detroit session of the A. M. A. will appear later in the Journal.

DEATH OF DR. THEO. B. HAYNE

As we go to press we learn of the untimely death of one of South Carolina's most promising physicians. Dr. Theodore B. Hayne, son of Dr. James A. Hayne, our State Health Officer, died on July 11, at Lagos, West Africa, from yellow fever contracted while working for the Rockefeller foundation in an endeavor to find a serum to combat the disease. Dr. Hayne's activities in preventive medicine from his early boyhood had long been known, especially, to the State Board of Health of South Carolina. As a boy of sixteen he became one of the Assistants to the late Dr. Carter of the Public Health Service, a world famous authority on Malaria. It will be remembered that the preeminent scientist, Noguchi, died of yellow fever in this same locality not so long ago where he had gone to study the disease. The profoundest sympathy of every doctor in South Carolina goes out to the grief stricken members of the family of this distinguished young scientist.

LATENT GAS BACILLUS INFECTION COMPLICATING GANGRENE OF LOWER EXTREMITY

Robert R. Linton, Boston (Journal A. M. A., July 19, 1930), reports six cases and concludes that gas bacillus infection may develop in any case of gangrene of the lower extremity resulting from impaired circulation regardless of the age of the patient or whether the gangrene is moist or dry or the skin is intact or broken. Conservative treatment, including delay for the appearance of a definite line of demarcation, if carried too far in these cases is dangerous, because of possible gas bacillus infection in the gangrenous extremity. Roentgenograms of the affected limb may show gas deep in the muscle planes that cannot be detected by palpation. In any suspected case of gas bacillus infection, immediate amputation is imperative. In such cases, unless there is evidence of good circulation below the knee, it is much safer to amputate through the thigh. In cases with a definite gas bacillus infection in the lower leg, either before or after a primary amputation, the operation of choice is a guillotine amputation through the lower third of the thigh, with no attempt at closure of the stump.

SOLITARY CYST OF KIDNEY

Solitary cyst of the kidney was found by Herman L. Kretschmer, Chicago (Journal A. M. A., July 19, 1930), in a series of five cases. He says: "This condition is probably not as rare as is generally thought by clinicians, especially urologists. A good roentgenogram ought to show the outline of the cyst in the majority of cases. In cases in which the cyst springs from the lower pole, its recognition from the roentgenogram should be relatively easy. Cysts in the upper pole are not so easily recognized in plain films, and when large they result in changes in the renal outline. The pyelograms may vary, depending on the size of the cyst, its origin and the direction of growth. In this series, one pyelogram was normal and two were definitely abnormal."

ORIGINAL ARTICLES

*BRONCHO-SINUSITIC DISEASES IN CHILDREN

I. H. GRIMBALL, M.D., Greenville, S. C.

Recently there appeared in the Journal of the American Medical Society an article by Wasson(1) on the X-ray interpretations of chest plates of children suffering from infections of the paranasal sinuses. This interpretation presented a pathological entity from the X-ray point, and to this has he given the name of Bronchosinusitis disease. It is from the clinical view point that I will try to present these cases, with an idea of showing the close relationship existing between infection of the paranasal sinus and diseases of the lower respiratory tract. The principal diseases being bronchial asthma, bronchiectasis, acute and chronic bronchitis. Not every case of these diseases is due to infection of the sinus; but investigation by such men as, Dean(2), Mullen(3), Ruskin(4), Marriott(5) and others has demonstrated the great frequency between the two; and that a careful study of our cases of this type, with the cooperation of the Otolaryangolist and Roentgenologist, will result in a better understanding of this condition and a better diagnosis. The majority of these cases begin early in life, between the second and fifth years, and run a rather chronic course, with acute exacerbations with every fresh cold. Many a case has been diagnosed as pulmonary tuberculosis and condemned as such; when a careful examination, including a careful history and study of the sinuses will elicit the true causative factor.

We must realize that even at birth there are two well developed sinuses present, the antrum and ethmoid, and the anatomical arrangement of the openings of these two facilitates contamination and infection from every attack of acute coryza. Many men believe that with every attack of acute coryza there is infection of these two sinuses, as in every attack of acute otitis media there is involment of the mastoid antra; but drainage being better from the sinuses we don't have the severe symptoms occurring.

The route of the infection and the explanation of some of the symptoms present has been demonstrated very clearly by Mullen(3) in his experimental work; but aside from this lymphatic route, the aspiration of infected material, and infection thru the blood stream is responsible for a number of cases. It is not from the acute infection of the sinus that we get the picture in the chest; but from repeated attacks in which the mucus membrane lining the sinus has become hyperplastic and water logged; natural drainage is interferred with, and there is great absorbtion of infected material and toxins. In the cases of bronchial asthma, allergy plays an important part; but there is a vicious circle, in that the allergy produces edema of the mucus membrane, which in turn produces more allergic reactions.

Mullen's(3) work on the route of infection by the lymphatics is evidenced by the cervical ademitis present in these cases, even after the tonsils and adenoids have been removed. This ademitis is marked in the retropharyangeal deep cervical and on down into the mediastinal and peribronchial group. It is this later group of glands which by pressure on the bronchial blood vessels and nerves produce many of the symptoms found.

The symptomatology in these cases is rather constant, a careful history being of great importance; for though the physical examination is leading, the findings are not conclusive. The beginning of the attacks is usually between the second and fifth years; usually after tonsils and adenoids have been removed for some length of time; and as the parent expresses it; "my child has as many colds and coughs now as before being operated on, and seems to be going down hill." Soon they become underweight, fretful, irritable, have a poor appetite, are light sleepers and many of them develop some habit spasm. The temperature is very

*Read before the South Carolina Medical Association, Florence, S. C., May 8, 1930.

seldom elevated except in the acute exacerbations and then it is apt to reach 103°-104°F. They continue to be mouth breathers and present edema under the lower lids. The most constant symptom is the cough, which is of a dry, hacking, nonproductive type, occurring during the night as well and accompanied by throat clearing. The older children will tell you that there is a sense of fullness and dryness in the throat, which produces a tickle and a desire to cough. Frequent acute exacerbations occur from various causes; as colds, dampness, sudden chilling or overheating, swimming, etc.; and of course through acute infectious diseases of childhood. Very often our history dates from one of these acute infectious diseases. During one of these exacerbations all of the above symptoms are exaggerated and the child is acutely ill; however our attention is directed mainly to the lower respiratory tract, because of the bronchitis, asthma or bronchopneumonia present and we do not suspect sinus infection as the etiological factor. These attacks vary from a few days to several weeks, depending on the type of disease present.

The physical findings between the acute attacks is not very definite; the lungs showing very little or no changes to percussion or ascultation; D'Espine's sign is usually present and indicates only peribronchial and hilus enlargement. There is a definite enlargement of the cervical glands; and more important a distinct beading of the lymphatic glands on the lateral walls of the pharynx, especially important if the adenoids have been removed. The mucus membrane of the nose may be red and swollen, and there is present in nearly every case a mucopurulent discharge in the middle meatus. The blood findings are not helpful, as it may be normal in both the acute and chronic stages. The urinary findings may be only a trace of albumin or a few pus cells. The X-ray of chest and sinuses and examination of the nose, throat and sinuses should be left to the Roentgenologist and Otolaryangolist, with whom we should work in close cooperation for diagnosis and treatment.

The treatment of these cases for a permanent cure is rather unsatisfactory; though decided improvement over a length of time can be obtained by careful attention to improving the general condition of the patient, and conservative treatment in the nose. The importance of a correct diet; especially one rich in vitamin A, and the elimination of excessive starches and sugars. Special attention should be given to the ventilation and heating of the homes and schools. At this point I would like to condemn the use of pipeless hot air furnaces in the homes. The investigation of sinus disease in the other members of the family and nurses and prevention of infection from the child's playmates; even as far occasionally as placing the child in strict isolation.

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DISCUSSIONS

This discussion includes paper by Dr. P. V. Mikell on Diagnosis and Treatment of Sinus Infection published in June Issue.—Ed.

Dr. J. W. Jervey, Jr., Greenville: I want to thank both these gentlemen for the papers which they have presented this afternoon. Dr. Grimball's paper especially, which I was asked to discuss, is on a more or less new subject to most of us. In fact, I had never heard of the term "bronchosinusitic" until Wasson came out with his article in the Journal of the American Medical Association some months ago. I personally, in reading his article, was unable to get his differentiation between the tuberculous infection of the mediastinal nodes, the peribronchial nodes, and the picture in the chest brought about by sinus infection. It seems to me the two are very hard to distinguish, not knowing much about x-ray. For that reason I should like to emphasize that in such cases, where no area in the peripheral part of the lungs can be made out, the sinuses should be very carefully examined; because it is obviously unfair to attach a diagnosis of pulmonary tuberculosis or even mediastinal tuberculosis on anyone who hasn't it.

We are, I believe, in recent years seeing more nasal-sinus infections. Exactly why no one seems

to know, but the recent epidemics of influenza have undoubtedly played a large part. Then, too, the manner of living no doubt does its share; we live too fast and furiously. We ride around in automobiles with a great blast of wind blowing on our faces and in dust and dirt. I can not help but think that plays a part in sinus infection.

Acute sinus infections yield very readily to ordinary procedures, such as the use of ephedrin or any one of the shrinking preparations, and occasionally to surgery where indieated. It is the chronic conditions that give us most trouble. In that connection I am going to speak first about the question of removal of tonsils and adenoids. I hope not too many of the laity got hold of Robert Quillen's article in the papers in the state reeently, in which he said in the great majority of cases in which tonsils and adenoids are removed the surgieal procedure is unwarranted. I am afraid he was talking about a subject of which he knows very little, and he may do a great deal of harm.

Surgery in the nose we do not like to do unless it is necessary. Of course, a deviated septum may be removed with advantage. Occasionally a radical procedure is necessary. But very rarely in our praetice (I am speaking more of my father than of myself) do we have to do radical surgery in the ethmoid area, and then only when the disease is of the hyperplastic type.

Medical treatment in sinusitis is a long drawn out affair, and I do not believe we are apt to tell our patients that particular phase of it often enough. I do not know that I can go quite so far as Dr. Stuckey does, in his beliefs about the effect of diet on chronic infections; but there is certainly a great deal in it, and we are in the habit of going into that rather in detail with our patients suffering from chronic sinusitis. They are told to eut down on sugars and starehes as much as possible, to eat plenty of fruits and fresh vegetables and drink plenty of milk, and are also put on small doses of codliver oil. There is no question that the administration of vitamin A over long periods of time has been valuable; that is one thing I want to stress. We can not expeet to get results in the treatment of chronic sinusitis in a month or six months or even a year.

In regard to the use of nasal irrigation and siphon douches, I ean not agree with Dr. Mikell on that. We do oeeasionally see an acute ear after the patient has been using a siphon douehe; on the other hand, I have seen just as many in sinus infections in which the douche has not been used. I am sorry my experience has not been long enough to enable me to present any large series of cases, but my observation is that the patient is just as likely to have an acute ear if he does not use a siphon douche as if he does, provided he does it properly. The patient is instructed most carefully, and I must say I do not believe we have ever gotten into any difficulty with it. If you eould see the results which we get in those irrigations and the tremendous amount of relief whieh they afford the sufferer, I think you would agree with me that it is a good thing to use.

Dr. M. R. Mobley, Florence: Our essayists, Dr. Grimball and Dr. Mikell, have brought to us a subject which is of vital importance or should be of vital importance to every man practicing medicine. Sinee the onset of influenza in 1918, I think we are all agreed that the incidence of upper respiratory infections has been markedly increased. Personally, I think another eontributing faetor is that following the World War those of our soldiers returning from overseas have brought with them a bacterial flora from a eountry whieh has been populated for eenturies—a bacterial flora to whieh our citizens have not had opportunity to develop resistance.

All men doing medicine, all general practitioners, are constantly seeing these children referred to by Dr. Grimball. They generally give the history of catching cold easily, and very frequently nothing has been done for the cold. Often the parents have been told that with the removal of the tonsils and adenoids the child would be all right, but it still has colds. It is the prevalence of those intractable, untreated colds which leads to the condition to which Dr. Grimball refers. Inasmuch as in the great majority of these cases of infeetion the primary seat of infection is in the sinuses, I think perhaps a better name for the disease would be sinobronchitic disease.

If we eould educate ourselves and our lay people up to the prophylaxis of sinus infections, that would be ideal. The main thing necessary is to make them recognize that an ordinary eold that lasts beyond a few days means involvement of the sinuses. Of course, with an ordinary cold there is an involvement of the nasal mucosa, and naturally with involvement of the nasal mucosa there is involvement of the sinuses. With the swelling of the mueous membrane there is obstruction, and with obstruction sinus infeetion is imminent. During the early summer there may be an outbreak of sinus infections from the use of swimming pools. I think the danger in running water is not nearly so great.

The cases to which Dr. Grimball referred can simulate tubereulosis in an alarming manner. They can present almost the typical text-book pieture, and very frequently it is a very diffieult thing to diagnose or differentiate between this type of ease and tuberculosis.

Of eourse, you are all familiar with the usual symptoms of sinus disease, pain and nasal obstruetion. Very frequently the pain is not over the sinus infected; in an antrum infeetion the pain may be supra-orbital. Another significant

symptom is the loss of the sense of smell. You will recall the distribution of the olfactory nerves along the upper third of the nose, in the ethmoids and along the septum. If there is any prolonged infection of the upper part of the nose, there will be loss of the sense of smell; that is a very significant symptom of sinus infection. We should instruct our lay people that a nasal discharge is an abnormal thing, especially a chronic discharge. Anyone with a chronic nasal discharge should seek the advice of a physician.

As to transillumination, personally I think that transillumination of the antrum in a dark room is a very valuable thing, using the light either in the mouth or in the orbit. Transillumination of the frontal sinus is very valuable, especially if you have a previous record of a transillumination. I think transillumination in the height of an infection is of doubtful value, without having a clear previous transillumination to refer to. X-ray findings, I think, should be considered in the light of a very thorough clinical examination, combined with transillumination, because the x-ray picture of a sinus is the history of that sinus from birth. There may be thickened mucosa there which will show up as a shadow.

In the treatment of these infections, especially in children, that which has given us most satisfaction is one of the salts of silver, combined with an astringent. Combine the silver salt with an astringent (and I think the best astringent is a preparation of Parke-Davis called aphedrine.) Personally, I am not a believer in the use of atomizers. We instruct our patients to lie down, with the head hanging over and with the opening of the nose pointing to the ceiling, then drop the medicine in. It is a little disagreeable and is attended by some headache, but it is very efficacious.

Dr. E. W. Carpenter, Greenville: These papers are very valuable, and I can not resist saying a word. We must get away from the idea that we have laryngitis, tonsillitis, pharyngitis, bronchitis, or tracheitis as an entity; we do not. We must learn to visualize a respiratory-tract infection as a whole. If you cook cabbage in the kitchen, you will get the odor in the parlor; if you have infection in any part of the respiratory tract you will have it in others. These children that come to the specialist do not come in the acute stages; they come after the family doctor has doped and doped and doped, and the mother brings the child to the ear and nose man because the child, perhaps, has an uncontrollable cough. Coughs in children are carried to the limit; the child gets a habit reflex and does not know how to control it. Most of these cases are subacute.

Dr. Norma P. Dunning, Rock Hill: Speaking of the place of the swimming pool in the etiology of colds, I have found anywhere from twenty to sometimes one hundred colds a day, because any girl who has any temperature at all has to go to bed if she has a cold. We find that colds spread from roommate to roommate rather than in the class rooms or in the swimming pool. I think that is due to the rigid care with which the physical instructors watch everybody who goes in the pool, and the girls know they may not go in the pool if they have any sort of nasal infection or any other kind of infection. I think every cold is a potential sinusitis. When I first went to Winthrop I saw colds, on the average, two days after the cold began; then, after much lecturing, I saw them the day after the cold began. Now I can say I see every cold in the infirmary, at most, six hours after the cold begins, because they have learned to come at the first cough or sneeze or tickling in the throat. The students have become very co-operative, because they have been educated. Then, with the girls who have chronic sinus infections, they are so used to coming to the infirmary that when they come with a cold they are put to bed.

I think perhaps diet and a regular life have some efficacy. I was surprised to see, in examining the freshmen over again, that they did not have so many colds, although they had received no vaccine at all; and I think that is largely due to the way they live.

Dr. Grimball, closing the discussion: There are one or two points I want to mention. My paper is rather short, so I shall take a little more time to speak particularly of prophylaxis in infants in infections of the upper respiratory tract. We ought to practice preventive medicine; that is one thing I am trying to impress on the mothers. Everybody wants to see the new baby and handle it. Especially in the season through which we have just passed there is such a prevalence of respiratory infections among older people that I think it would be a good thing if we could pin a great big red "Do not touch" sign on the baby and put masks on all the relatives and friends that come in to see the new arrival.

It is not the acute sinus infection that produces pathological changes in the lower respiratory tract of which I spoke; it is the repeated attacks, with hyperplastic, waterlogged mucous membrane. I think Dean has gone so far as to say that allergy plays a part. Of course, tuberculosis is one thing that, in any child coming in to you with a chronic condition, should be kept in mind. I had a little fear in making the statement in my paper following a symposium on tuberculosis, but I do believe that in many of these children careful examination for sinus infection and eradication of foci of infection would improve conditions in the lower respiratory tract. We have not the acute symptoms in children that we have in adults; we

do not have pain and do not have the swelling of the face that sometimes occurs. But there is a tremendous amount of edema of the mucous membrane; it swells up until the passages are blocked and the child can not breathe through the nose at all. As to cough, these children cought, they bark, they do everything. If there is much postnasal dripping, so that it excites the gag reflex, they vomit; and it taxes one's ingenuity sometimes to distinguish between whooping-cough and sinus infection in a child.

Dr. Mikell, closing the discussion: Dr. Mobley brought up the thought that these bacterial flora were brought across from the old countries. I have found in my experience, however, that sinus infection has been more common in women than in men, I think possibly due to the craze for dieting. Most women look like thermometers; you can almost look through them. I think if you put them on a full diet it will help to clear up the sinus infection.

I enjoyed Dr. Grimball's paper very much. He has described the symptomatology very clearly. In spite of Quillen (I think he ough to stick to his "Aunt Het"), tonsillotomy will often clear them up.

In regard to the irrigation of saline, I think it is necessary in the doctor's office, but I think it is a pernicious habit to give any patient a nasal douche to use at home. I think they should have a bland oil. In children, especially, we think it is very dangerous, because they are likely to have a middle-ear abscess. So, to get right down to the treatment, it is shrinking down, cleansing, silver packs, ventilation, and drainage.

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*ACUTE INTESTINAL OBSTRUCTION AND ITS MANAGEMENT

J. H. Taylor, M.D., F.A.C.S., Columbia, S. C.

A condition such as acute intestinal obstruction, that shows a mortality of from 40% to 75%, should be the subject of thoughtful consideration for any medical group and I offer no apology for its presentation on this occasion.

Best(1) states that Guillame gives in a series of 3,269 cases, a mortality of 63.2%; Arhurst in 346 cases, 69.3%; St. Thomas Hospital (London) over a twenty year period a mortality of 58%; Lee and Downes Records of Philadelphia Hospitals, a mortality of 75%; and so it goes. In the hands of some small groups or individuals thoroughly versed in its management, it may get as low as 30%, but even that mortality calls for the fixing of the responsibility.

The answer is: early diagnosis and prompt and efficient surgery. These will ever be the Alpha and Omega in reducing this excessively high death rate. Without early diagnosis, little lowering can be expected from the surgeon. In fact the surgical world to-day is wageing the identical campaign that a few years ago was at its height in the case of appendicitis.

Miller(2) estimates that the "mortality rises 1% with each hour of procrastination" and quotes Moynihan as regarding any mortality over 10% as "the mortality of delay" and Sr. Wm. Taylor as speaking of the "inexcusable ignorance or carelessness of general practitioners who see these cases early and treat them medically." Strong language that, but in some cases justifiable, and applicable equally to the surgeon guilty of unnecessary delay. In many instances, too, the fatal loss of time has occurred before the medical man is called in. However, the medical brother must be constantly reminded that any abdominal pain lasting more than three or four hours, calls for a surgical consultation.

The two most frequent causes of acute intestinal obstruction are strangulated hernias and postoperative adhesions and bands. In the presence of the well known triad of symptoms, —vomiting, abdominal pain and constipation, —examine at once the hernia sites and look to recent abdominal operations for their possible explanation. Other causes are volvulus, intussusception, stricture of the rectum, cancer of the colon, Meckel's diverticulum and toxemias, the later giving rise to paralysis of the gut due to the toxemia, and thus producing what in effect is an obstructed bowel—known as toxic ileus, frequent in uremic cases.

The triad of major symptoms are, as stated, pain, vomiting and acute constipation.

As in all acute abdominal lesions, the pain of obstruction appears commonly first in the epigastrium, but the primary site may be first about the umbilicus. Usually sudden and acute, it is intermittent and crampy, later becoming continuous and involving the whole abdomen. In cases of messenteric thrombosis or embolism, it is continuous from the start.

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*Read before the South Carolina Medical Association, Florence, S. C., May 7, 1930.

Vomiting is the second most important symptom. The higher the obstruction, the sooner it appears and the more persistent. In obstruction of the colon, it may come very late. In the early stages, it consists of the stomach contents, then the bile stained contents of the duodenum followed finally by the true fecal material from the upper small intestine, a pathognomonic sign. In the later stages, the fecal vomiting is effortless and is due to the high pressure of fluid and gas below.

Constipation. After the onset of symptoms with an obstruction in the small bowel, there may be passed fecal matter accumulated below the point of obstruction. In fact, more than one small movement may be had and enemas should be repeated in case of doubt. In intussusception it must be remembered that frequent watery or blood stained mucous stools may be passed. This may occur also in thrombotic obstruction.

Other symptoms of lesser value in early diagnosis are distension, stormy peristalsis and shock.

Distension is constant in the later stages and progressive but not often present at the onset.

Peristalsis when visible establishes the diagnosis, but rarely is observed except in very thin individuals.

Shock appears with the toxemia of the later stages, but when the circulation is involved, it occurs early. The temperature, pulse and leukocyte count are of very little aid in early diagnosis. One other item of major importance is the taking of a careful history with particular emphasis on the symptoms and their relations to one another.

We must recognize now that the requisite for early treatment is an early diagnosis and that this burden is a threefold one resting alike on the patient or his relatives, on the medical attendant and on the surgeon, or on all three. Unfortunately, the layman usually concludes at once that the nausea and pain are the results of some indiscretion in diet and a purgative is immediately given. However, when the medical attendant is called in to see a case giving a history of nausea and vomiting, cramplike pains and constipation, he must ever bear in mind that while it may be a case of food poisoning, still it may also be an obstruction case. Careful inquiry must be made for a history of a previous abdominal operation, or the presence of a hernia. If such be present, all medication should be withheld and a lavage and an enema given. Above all things, do not attempt to force anything through the bowels. If it be a case of obstructive constipation, or fecal impaction, a simple rectal examination will clear up the diagnosis and appropriate treatment can then be instituted. If it be a true obstruction case, the delay in relief of pain makes the patient more readily consent to immediate operative treatment, a very much to be desired frame of mind. One must bear in mind, too, that other conditions than food poisoning may simulate mechanical obstruction of the bowel, such as lead poisoning, the gastric crises of tabes, and the toxemias such as that associated with uremia.

In my early days of practice, before the introduction of insulin, I was attending an elderly diabetic, who, owing to toxemia, developed the usual severe nausea and vomiting with very marked abdominal distension. The family requested a consultation and the doctor made a flatfooted diagnosis of obstruction of the bowel, urging immediate operation. To this, I strongly objected, stating my firm conviction to the family that it was solely a toxic condition. However, the abdomen was laid open. There was no mechanical obstruction.

In addition to the above diseases, the acute inflamatory abdominal conditions such as appendicitis, diverticulitis and pancreatitis may prove quite confusing. In these the blood picture will be of great assistance, as acute intestinal obstruction gives no blood cell changes in the early stages. On the other hand, postoperative ileus may prove most baffling, simulating closely mechanical obstruction, especially so as both tend to appear about the same time after operation. However, there is more apt to be a localizing of the pain in mechanical obstruction and the peristaltic waves are, when visible or palpable, found to be more stormy than in ileus. Hot applications and enemas should be given a trial and these failing, spinal anesthesia may be resorted to. Boland(3) reports obtaining good results from spinal anesthesia in three cases of ileus. The injection of 2 c. c. of spinocain in from a few to twelve hours, he

claims gave relief with a large evacuation of feces and gas.

It is thought that the splanchnic inhibitory reflexes are blocked so that the vagus motor reflexes have full play. As a Parthian shot closing this phase of the question may I cite you this epigram: (4) "The man who waits for the perfect picture of obstruction will seldom make a mistake in diagnosis, but he will lose many patients."

Death in the acute obstruction case is a toxic death, and Whipple, Stone and others have, by experimental animal work, thrown much light on the subject and established valuable facts of great practical use in treatment. By producing artificial obstruction in dogs, they have studied the toxic products resulting in the obstructed gut and their effect upon the organism. A study of the blood chemistry based on this work is thought by some of great aid in questionable cases. The first change noted is a rise in the non-protein nitrogen of the blood, and a decrease in the concentration of the chlorides.

The diagnosis of acute obstruction having been arrived at, the treatment should be an enema as soon as possible unless it has already been given. A lavage follows and in an intermediate or late case, this should be repeated when the case goes on the table in order to prevent vomiting and possible aspiration of this material during the anesthetic. If the case be toxic, 1000 c. c. of a saline solution with 5% glucose added should be given before operation. This replaces the fluid lost by vomiting, sweating, and the outpouring of fluids into the intestine and dilutes the toxines. Crile advocates a transfusion of blood where the circulation is bad. The anesthetic should be chosen to suit the individual case. Personally, my experience has been with ether and local anesthetics, though spinal analgesia seems to have many advocates. C. J. Miller(2) in an exhaustive study of 343 operative cases advocates ether, except in extremely ill cases, and gives figures purporting to show a much lower mortality following its use than that with local or spinal analgesia. As to the *extent* of the operation, this would be determined by the condition of the patient and the duration of the pathology. The longer the duration and the greater the toxemia, the more conservative should be the immediate treatment.

In very toxic cases, the least done the better and a simple enterostomy on the jejunum done through the upper left abdomen under local anesthesia is at times a life saving procedure. Later, if the case improves, the relief of the obstruction can be undertaken. In the obstructed intestine, there occurs a reverse peristalsis bringing the fluid contents to the upper portion and here the enterostomy relieves the distended bowel of toxic laden fluids and gas. A simple enterostomy also is advocated by Shands where an acute obstruction develops the first week after an abdominal operation and which is due, as a rule, to fresh adhesions from a localized peritonitis. He claims that after this simple treatment, the lumen of the bowel in a few days most often becomes re-established without a resulting fistula at the enterostomy opening. Should results not be gotten, further treatment will, of course, be necessary.

In acute obstruction cases seen within the first thirty-six hours, in good condition and before distension has supervened, if the gut at the site of the obstruction is of good color after its release, it may be returned to the abdomen and the abdomen closed without drainage. In later cases where there is distension and a toxemia, if the gut after the obstruction is removed has its circulation restored, it is best to do an enterostomy to the oral side of the obstructed portion, otherwise the toxines from above instead of being drained off, pass down into the distal portion of the gut where their absorption may cause death.

Where the gut does not show a rapid return of the circulation as manifested by the color and lustre after the obstruction is removed, and there be a line of demarkation of color apparent, it should be resected. If the patient's condition be bad, this segment should not be returned to the abdominal cavity, but delivered upon the abdomen and a tube inserted in the oral segment of the gut. Later this damaged segment is resected and a reconstruction of the bowel undertaken when the patient's condition warrants.

In cases of gangrene of the bowel, the segment must never be left in the abdomen. An enterostomy is done just above the gangrenous

area or else the affected segment is resected with the two open ends sutured into the incision, (called the gun barrel operation), until such time as a repair can safely be undertaken. The postoperative treatment is of extreme importance in the ill case. Lavage must be continued and fluids to dilute and hasten elimination of the poison must be given, namely, normal saline and glucose intravenously or subcutaneously, with fluids also given by mouth and rectum if possible. The stimulants, of course, and pituitrin have a very definite place in this after treatment, as has a wide awake, competent nurse and a good medical consultant.

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(3) Boland, F. L. Ky. State Med. Journal, February, 1930.

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DISCUSSIONS

Dr. S. E. Harmon, Columbia: I know of no subject that requires more study and better judgment than intestinal obstruction. Intestinal obstruction is an acute abdominal emergency. I do not think I can say anything better, as I consider it, than to tell you my method of handling an acute abdominal emergency—abdominal pain, nausea, and vomiting, which are the first symptoms of an acute obstruction. The result of handling acute intestinal obstruction is practically no better today than it was twenty years ago. Our mortality is just about as high, and the only way by which we can reduce that mortality is by early recognition and early surgical interference. Nature, fortunately, takes care of most conditions for us; but nature does not go very far in taking care of acute intestinal obstruction. Occasionally nature will handle the situation, but not often. With abdominal pain which is paroxysmal in character, with nausea and vomiting, that patient should not have anything by mouth. We should not be in too great a hurry to relieve the pain until we know what we are dealing with. Vomiting, unfortunately, is not very frequent in the early stages; it occurs only occasionally, as a rule; and there is where we often make an error. As Dr. Taylor has told you, you do not have distention early in acute intestinal obstruction. Leave the stomach empty, absolutely, of everything; withhold fluids, and medicine. That is one of my differentiating points between acute inflammatory conditions and an acute intestinal obstruction. If you leave the stomach empty, absolutely, without introducing anything into it, in an acute inflammatory condition as a rule you will have no further vomiting. In acute intestinal obstruction you will have, even though you give nothing by mouth; occasionally the patient will vomit. I have made it a rule, in my handling acute abdominal cases, in cases of doubt between acute inflammatory condition and acute obstruction, after washing out the stomach (and you should do that, should wash it out until the fluid returns clear) then give nothing by mouth; and if that patient does not vomit any more one is pretty safe in saying it is not obstruction. Support the patient by giving water glucose and saline solution by rectum and subcutaneously. I do not believe much in giving solutions intravenously. If the patient continues to vomit, one can pretty well decide that it is obstruction; and the requirements to lower the death rate are early recognition and early surgical interference. Those are the points we must think about. Any drugging, or anything given by mouth aggravates the condition.

Just one more word, in repetition. After the stomach is thoroughly empty and given rest in every way, watch the patient carefully. It that patient vomits after that, usually there is an obstruction. If he does not vomit, after watching several hours, twelve to twenty-four, whatever the time may be, I think it is pretty conclusive. The differentiating point between an inflammatory condition and an obstruction is the vomiting.

Just a word more as to the cardinal symptoms of intestinal obstruction. They are pain, nausea, and vomiting—continued vomiting, with a cessation of the fecal current. Treatment: Rest in every way. Early diagnosis and early surgical interference.

Dr. C. B. Earle, Greenville: I wish to mention the use of pituitrin in intestinal obstruction only to condemn its use. It would be very dangerous for some of the others of us to use pituitrin before that patient is well. Dr. Harmon mentioned that the mortality in intestinal obstruction has not seriously decreased in the last fifty years. Perhaps that is true. Nothing truer has been written about it than fifty years ago—that immediate operation is necessary to save life. But we can do much to prevent it. All of us, I think, who practice surgery have had the disagreeable experience

of going back in our own patients to relieve intestinal obstruction after a previous operation. I had the disagreeable experience of operating last year upon a patient on whom I had done the first operation twenty years before. Probably I was not quite as gentle as I might have been and did not protect that peritoneum; otherwise she would not have had obstruction. I wish to say a word of caution about using pituitrin or anything else that will increase the peristaltic contractions until that patient is entirely well, and then he does not need it.

By Dr. F. H. McLeod, Florence, S. C.: Dr. Taylor's paper is most admirable and comprehensive. It must be remembered that in every case of intestinal obstruction at some time, whether one day, twelve hours, or three days, or longer, there has been absorbed a lethal dose of toxin, after which the patient has no chance of recovery. Therefore, there can be no greater emergency in surgery than the early recognition and operation of intestinal obstruction. The doctor who gives a dose of morphine to the patient with intestinal obstruction may contribute to that patient's comfort and peace of mind, during which the patient may refuse surgery, and thereby losing valuable time with the probability of passing into the period when operation is too late. Morphine is a dangerous drug in any acute abdomen, and especially so in acute intestinal obstruction.

It is said that only a thermometer, stomach tube and an enema can are needed to make a diagnosis of intestinal obstruction. This is largely true because the diagnosis must be made on an intelligent interpretation of the patient's symptoms. As Dr. Taylor said, the doctor who waits to make a correct diagnosis will make it. There is no question about that, but when he makes his diagnosis he will also probably write a death certificate.

It is a surgical rule that any patient who has acute abdominal pain that is not relieved in six to eight hours, has a surgical abdomen. That may sound radical, but if there is nothing wrong with the patient's abdomen an explanatory will not hurt him. If there is anything wrong, the operation may relieve him.

Fecal vomiting is a definite pathognomonic sign of intestinal obstruction, but it occurs so late that the chances of saving the patient are very very small. Miller, whom Dr. Taylor quoted, gives a table of the mortality after twelve hours, twenty-four hours, forty-eight hours, etc., which shows a rapidly increasing death rate beyond the first twenty-four hours. Dr. Harmon said that when a patient is tided over the first few hours and has no rise in temperature, an inflammatory process can be eliminated—a differentiation between that and intestinal obstruction.

The patient who after surgery develops obstruction may present a picture rather difficult in interpretation. Postoperative obstruction may occur from an impingement in the lumen of the gut, or as an acute obstruction. Differentiation between obstruction and ileus is to be determined.

Perhaps the most important symptom of an intestinal obstruction is tumultuous peristalsis, and when demonstrated, is of the greatest significance, but when it is not possible to determine between ileus and obstruction, an enterostomy should always be done. We use preferably the procedure of the late Dr. J. W. Long, of Greensboro. Under local anaesthesia a loop of distended gut is pulled through a small incision in the abdominal wall and in a few hours opened. This may relieve the patient entirely, or may safely tide him over until other operative measures are indicated.

Of all causes of death due to abdominal disease, acute intestinal obstruction stands at the head of the list.

Dr. Douglas Jennings, Bennettsville: I, too, want to thank Dr. Taylor for bringing this condition to our attention. If the death rate stands at from thirty to sixty per cent, it certainly demands our consideration.

Dr. Taylor mentioned certain causes of paralytic ileus, such as diabetes and nephritis. I want to mention the frequent occurrence of paralytic ileus in pneumonia. He also mentioned the use of Dr. Boland of Atlanta of spinal anesthesia for paralytic ileus. I wish to record the use of spinocaine in one case of paralytic ileus in a pneumonia patient, who failed to respond to gastric lavage, colon tube, and pituitrin. This was cleared up within two hours after the injection of spinocaine in the lumbar spinal canal.

Dr. E. A. Park, Johns Hopkins Hospital, Baltimore, MD.: I have just returned from some of the medical meetings at Atlantic City and there heard a paper on intestinal obstruction in which the author took the view that the shock and toxic symptoms, formerly attributed to the absorption of poisons of a protein nature, were in reality due to the loss of chlorid from the body. The gastric juice is usually much richer in chlorid than it is in basic substances, and with incessant vomiting the body becomes depleted in chlorids. Gamble proved this some years ago and his work furnished the basic facts of our knowledge. Of course, I know nothing about surgery, but it seems to me that if what he says is true the very generous administration of sodium chlorid ought to be a very important aid in the treatment of intestinal obstruction.

Dr. Taylor, closing the discussion: I wish to emphasize the fact that of course one would not use pituitrin until the ileus is relieved and the whole route is clear.

I might say to Dr. Jennings, in regard to Dr. Boland's use of spinal anesthesia, that he used that in a case of toxic ileus, and that you misunderstood me.

As to the chlorids, one of the things that these toxins do is to lower tremendously the chlorids, and we give hypotonic salt solution in the treatment.

SURGERY

Wm. H. Prioleau, M.D., Charleston, S. C.

"TANNIC ACID IN THE TREATMENT OF BURNS"

The treatment of burns is of such great importance that it is well to consider it at regular intervals. In spite of recent advances, the carron oil and similar treatments are still too prevalent. An examination of the recent literature reveals that we can do no better than review the original article of Dr. Edward C. Davidson of the Henry Ford Hospital on "Tannic Acid in the Treatment of Burns" published in Surgery, Gynecology, and Obstetrics, August 1925.

The author considers the theories evolved to explain the constitutional reaction of burns, and arrives at the conclusion that the most tenable one is that of the absorption of toxic substances from the burned tissue. From this he reasons that the rational manner of combating the toxemia would lie in some form of local treatment which would prevent the absorption of autolytic products of protein decomposition.

Four such methods are to be considered: (1) By arresting the autolytic process; (2) By removal of the products of decomposition by mechanical means or by baths; (3) By slowing the process of absorption by the use of vasoconstrictor drugs; and (4) By causing a local coagulation of all devitalized tissue.

The first three methods have been used with varying success in the milder cases, however they have not given good results in severe cases. The fourth method was suggested to the author by the observation of Pfeiffer that the toxic extract from burned tissue was precipitated in vitro by bichloride of mercury in acid solution.

Of the drugs under consideration tannic acid seemed best to fill the requirements for use on human beings. It is a non-nitrogenous amorphous powder soluble in water. It precipitates proteins, alkaloids, and the salts of heavy metals. It forms a more or less stable compound with the protein constituents of the body fluids and cells. The precipitated proteins on the surface treated provide a coating protective against chemical, bacterial, and mechanical action, as well as against sensory irritation. It does not affect normal skin.

The author reports in detail the series of cases on which the treatment was developed. In outline form as finally evolved it consists first in combating the shock by morphia and other means, second in giving an abundance of fluids, and third in the local treatment which will be considered in detail.

The burned area is mechanically cleansed of dirt and loose tissue. Sterile gauze compresses are then applied and are soaked with a 2½% aqueous solution of tannic acid. It is important that this solution be freshly prepared as it rapidly undergoes decomposition to form gallic acid. The compresses are moistened at regular intervals, and are kept applied until the underlying tissue is of a light brown color. They are then freshly soaked and removed. The treated area is left exposed to the air. The result is a firm, dry, tough, insensitive covering. The patients body is kept under a cradle covered with sterile linen. Heat is supplied by electric bulbs placed within the cradle.

The results were most gratifying. The degree of toxemia which occurs on the second or third day was markedly less in this series of cases than in similar cases treated in other ways. Evidence of this was seen in the clinical behavior of the patient, the relatively low temperature, the comparatively low level of the non-protein nitrogen of the blood, and the low mortality rate from primary toxemia.

The coagulum peeled off of the second degree burns between the seventh and tenth days; the underlying area was covered with new epithelium. On the third degree burns the coagulum was partially loosened by the formation of serum underneath. Upon removing the coating the surface was found to be covered with granulations about ready for grafting. There was surprisingly little scar formation. The course of illness was comparatively free from pain and discomfort.

The treatment was much more effectual when tannic acid solution was the preliminary application and when started early. The application of boric acid solution compresses to the coagulated surface apparently liberated the toxins and permitted their absorption. This was evidenced by the increased toxicity of the patient, the elevation of the temperature, and the changing in the blood and urine. The application of vaseline had a softening affect but apparently did not liberate the toxins.

For the face the author recommends the use of 5% tannic acid in lanolin, however he states that this is not as effective as the aqueous solution. (Subsequent work of other observers has demonstrated that the aqueous solution can be used safely on the face, provided that the eyes and mouth are properly protected).

The author concludes that the preliminary treatment of burns with tannic acid compresses followed by exposure to air greatly lessens the toxemia and results in diminished scarring. The application acts as an analgesic and prevents the absorption of toxins and the loss of body fluids.

Since its development this treatment has been very favorably accepted and widely used. The contentions of the author have been verified numerous times. Today it is no doubt the most satisfactory method of treatment at our disposal.

ASTHMA DUE TO MOLD—ASPERGILLUS FUMIGATUS

In a woman who had been a victim of asthma for nine years, cutaneous tests with representative plant pollens, food proteins, epidermal proteins and a stock house dust extract were repeatedly negative. The first attack of asthma occurred after she had lived four years in a damp and musty brick house. A preparation of Aspergillus fumigatus was one of thirteen mold reagents to yield a strongly positive cutaneous and intracutaneous reaction. An extract of Aspergillus fumigatus in a dilution of 1:5,000, administered subcutaneously, gave rise to a marked local reaction and provoked the asthmatic state. In a series of 125 patients reported by Harry S. Berton, Washington, D. C. (Journal A. M. A., July 19, 1930), this patient was the only one to react positively to mold reagents. The incidence is 0.8 per cent. Physical and radiographic examinations of the patient were negative. Aspergillus fumigatus is a regular inhabitant of the soil and may be found in a dirt contaminated environment. Regional mold surveys may assume an importance in the control of asthma equal to that of botanic surveys in hay-fever. Especially is this true of the grain and fruit producing sections of our country. A wider application of this newer study, initiated in 1923, will indicate to what extent the molds are causative factors of asthma in the United States.

ECTOPIA TESTIS PERINEI

Hugh Robertson, Sayre, Pa., (Journal A. M. A., July 19, 1930), reports a case in which the gubernaculum was aberrant and well developed. The positive identification of structures forming a definite true and false third inguinal ring makes the author feel that the gubernaculum in this case "felt its way" into the aberrant position and that the testicle followed in its wake. A definite ridge of Scarpa's fascia was found between the openings of the false and true third rings. This ridge might have easily deflected the exploring gubernaculum into the false ring. It might be explained that these rings were existent at the time of operation and were not artificially produced by dissection. After the recovery of the testicle from its perineal position, it was replaced easily into its proper place in the right scrotum.

MINUTES

MINUTES HOUSE OF DELEGATES

The House of Delegates of the South Carolina Medical Association met in the assembly hall in the Florence Public Library on Tuesday, May 6, 1930, and was called to order at 8:30 p. m. by Dr. Charles R. May, Bennettsville, President.

President May announced that the Credentials Committee reported a quorum present.

President's Address

Charles R. May, M.D., Bennettsville

I have tried to meet the demands made on me to attend the district societies. With one exception I have attended all the meetings to which I have had an invitation, and the invitation to that one came to me after I had already made an engagement for that date. I have discussed medical economics and ethics, the need of organization and the objects of organization, and have tried in every way I could to increase the interest of the men along this line.

This meeting of the House of Delegates is a rather important one, because of proposed changes in the by-laws. It is contemplated that a president-elect will be named, as well as a president, to serve one year before assuming the duties of the office. It is expected that after this year of service he will be better able to carry out the duties of the office. The proposed new by-laws provide also for the election of a speaker of the House of Delegates, which is a very wise change.

I am delighted that the South Carolina Medical Association has again met with us in the Pee Dee section, where a hearty welcome always awaits you.

I take this opportunity to thank those men who have given me their cooperation during my term of service and who have helped in every way to protect and advance the interests of the Association.

REPORT OF SECRETARY-TREASURER

Dr. E. A. Hines, Secretary-Treasurer, read his report, which on motion was accepted.

FLORENCE MAY 6, 1930

Report of the Secretary Dr. Edgar A. Hines, Seneca, S.C .

It is gratifying to be able to report an increase of membership this year instead of a loss as was the case in 1929. We have a paid up membership of 813. The actual enrollment however would probably reach 900. The total members of physicians in this State now numbers 1313, a loss of some three or four hundred over a period of twenty-five years. The Columbia Medical Society heads the list of County Societies with 107 members. The Medical Society of South Carolina (Charleston County) next with 94.

Perhaps the most significant development has been along scientific lines and that is as it should be. Never before have so many attractive programs been put on by the constituent societies and never have so many distinguished guests been invited with the State to contribute to them. Practically all the larger societies have followed this plan with admirable results. The Columbia Medical Society has been particularly active in this regard and has been careful to encourage its own members by giving them prominent places on the program along with the invited guests. Unless this is done there is a potent danger in calling on outside assistance to aid in keeping up interest in the Society.

The district societies function with great success practically all over the State. Some of them are as large and interesting as the State Association itself used to be. The Marlboro Medical Society of which our President is a member surpasses all of the smaller county societies in its annual midwinter programs drawing visiting physicians from several States and with a total attendance of more than 100. One of the extraordinary events the past year was the celebration of its 140th anniversary by the Charleston Society, the 6th oldest medical society in the United States.

At this session by and large the reports coming to you from various other officials and committees should indicate marked progress along many lines and if favorable action be taken on the recommendations of some of them this Association will at once establish an epoch in its onward march to still greater achievements.

For the first time we will undertake one issue of a daily Bulletin tonight giving to the members tomorrow morning the results of tonight's session of the House and other news. This is probably a new venture for a State Society.

At this juncture you will pardon a brief story in retrospect. Twenty years ago, 1910, at Laurens I was elected your Secretary. Perhaps only three or four men are in the House tonight who were present then—and they are here as Ex-Presidents of this Association. The progress in organized medicine in America in these 20 years amazes the world. In South Carolina it has been spectacular. The Laurens meeting was unusual

in many respects. The Treasurer, Dr. Aimar, stated that the Association could not meet all its bills and the total assets January 1st, 1910, amounted to $50.31.

The delegates to the American Medical Association reported that Dr. Robt. Wilson had just been elected first Vice President of that body and that the membership was 33,000. (It is now nearly 100,000). Dr. John L. Dawson, brilliant clinician and teacher presided over the Laurens meeting. He had waged a winning personal fight against Tuberculosis and conducted a State wide campaign for the prevention of the dread disease. He pointed the way to the splendid progress to be emphasized at this meeting on Thursday. The State Board of Health had just established a Laboratory—the first of a magnificent superstructure of some 18 divisions known of all men today.

The Medical College, always a strong advocate of higher education for medical men, had just announced its requirements increased from a three year to a four year high school course for entrance. Practically all students have a college degree now.

The halls of the State Board of Medical Examiners were crowded with applicants for licenses to practice medicine to the number of approximately one hundred annually, of whom some 30 per cent failed. About half that number apply now and failure is almost unknown, thanks to class A medical schools.

The Laurens meeting reflected the pioneer work of Dr. J. W. Babcock and others in focussing the attention of the world on the study of Pellagra in South Carolina, a problem not yet completely solved.

Again, the record states that the political struggles over the presidency and the other official positions had nearly destroyed the scientific aspect of the annual meetings. So, the Constitution was amended to provide for a one day sitting of the House of Delegates.

Dr. S. C. Baker made his first report in 1910 of the Sims Memorial, which after 20 years the Woman's Auxiliary and the Association unveiled at Columbia last year.

In 1910 this Association began to send its Secretary to the American Medical Association as a permanent delegate. This plan was followed by many other States and this highly trained personnel wields a mighty influence in American Medicine today.

It would take me too far afield to fill in the intervening years of which most of you are familiar as you have played a major part in it. The exalted position you have permitted me to occupy so long has enabled me to travel widely and to come in close contact with world problems and world citizens in medicine.

As Editor in Chief of your Journal I have enjoyed an enviable privilege in the fascinating domain of medical literature.

This long and delightful service has been made possible only because of the loyal support of many hundreds of the members of this Association and for this loyalty and cooperation I am profoundly grateful.

REPORT OF BOARD OF COUNCILORS

Dr. S. E. Harmon, Chairman, reported as follows:

Your Board of Councilors met this afternoon with all members present save one.

Within the last year one of our members, Dr. Warnock, has passed to the great beyond, and Dr. G. M. Truluck has been appointed in his place.

We find conditions in the state about as usual. After attending to routine matters, your Council passed a rule this afternoon dispensing with the personal report from each councilor to the House of Delegates and decided that we would make only a general blanket report through the chairman.

We discussed the probability of too much activity in inviting speakers to our meetings, especially the county and district associations, and advise and suggest more local activity among their members. We thought that in the interests of the medical profession of South Carolina that is preferable to having many invited guests from beyond our borders.

The Council also had before it a report from the Committee on Medical Economics, which it indorsed in toto. This report will be read to you later.

I have here financial statements for the Association and for the Journal, also a letter addressed to Dr. Hines by Francis R. Richardson, which I wish now to read to you.

Seneca, S. C.
April 30, 1930.

Dr. E. A. Hines, Secretary-Treasurer,
South Carolina Medical Association,
Seneca, S. C.

Dear Sir:-

I beg to hand you herewith my report covering the annual audit of the books of the South Carolina Medical Association and the Journal of the South Carolina Medical Association. Accurate and systematic records of all receipts and disbursements have been kept by your office.

The attention of the Association is called to the increased membership and also to the increased receipts from advertising.

Yours truly,
Franas R. Richardson,
Auditor.

Seneca, S. C.
April 30, 1930.

Dr. E. A. Hines, Secretary & Treas.,
South Carolina Medical Association,
Seneca, So. Car.

Dear Dr. Hines:-

In regard to the accounts which you had with the Seneca Bank, as Receiver for this Bank which closed Jan. 24th, 1930, we hereby certify that there was on deposit in said bank according to the books of the Bank on Dec. 31, 1929, $600.56 in your name as Treasurer of the South Carolina Medical Association and also $1393.19 in your name as Editor of the Journal of the South Carolina Medical Association. There was also outstanding certificate of deposit Number 4154 for $1000.00.

With kindest regards, we are

Very truly yours,

South Carolina Savings Bank, Receiver The Seneca Bank,

(Signed) C. V. Stribling,
Cashier.

Auditor's Note.

Reconciliation of Jou. Acc. Bal. as shown by Bank	$ 1,393.19
Outstanding checks	36.25
Bal. shown on report	$ 1,356.94
Reconciliation of Asso. Acct. Bal. as shown by Bank	$ 600.56
Outstanding Check	50.00
Bal. shown on report	$ 550.56

On January 24, 1930, The Seneca Bank closed its doors. It was taken over by the South Carolina Savings Bank. On March 6, 1930, thirty per cent was refunded to the depositors. The Association and Journal received the following refund.

Treasurer S. C. Medical Asso.	$179.57
Journal S. C. Medical Asso.	313.35
Time Certificate of $1000 with interest	301.00
Total	$793.92

This last represents a considerable shrinkage from what I read as of December 31st. The assumption is, on the best information we can gather, that probably seventy-five per cent will be received in time. Of course, you all understand that in these bank failures you can not estimate the percentage that will be received.

REPORT OF SOUTH CAROLINA MEDICAL ASSOCIATION

Receipts

Balance in Bank, Jan. 1st, 1929	$ 493.73
Membership Dues, 1929	2,235.00
Membership Dues, 1928	18.00
	2,746.73

Disbursements

Printing	$ 1,310.56
Office Equipment	16.75
Stamps	14.25
Annual Audit	50.00
Traveling Expenses Secretary	208.21
Expenses Official Stenographer of Con.	161.40
Expenses Del. A.M.A., Portland, Oregon	350.00
Expenses as Councillor, Dr. C. R. May	24.50
Expenses Dr. W. E. Dandy, Con. Guest	60.50
Balance in Bank, Dec. 31. 1929	550.56
	2,746.73

Statement of Assets

Cash in Seneca Bank	$ 550.56
Office Furniture and Fixtures	704.77
	1,255.33

No Liabilities.

Total Assets of S. C. Medical Association and Journal

Medical Association	$ 1,255.33
Journal	2,356.94
	3,612.27

STATEMENT OF JOURNAL SOUTH CAROLINA MEDICAL ASSOCIATION

Receipts

Balance in Seneca Bank Jan. 1, 1929	$ 1,202.87
Subscriptions	1,506.40
Advertising	2,765.61
Interest on Time Deposit	75.00
	5,549.88

Disbursements

Salaries	$ 2,815.20
Stamps	50.00
Printing	750.00
Office Expense	263.20
Traveling Expenses Sec. Editor	50.00
Office Equipment	130.88
Sundries	133.66
Balance in Bank Dec. 31, 1929	1,356.94
	5,549.88

Statement of Assets

Cash in Seneca Bank	$ 1,356.94
Time Certificate of Deposit	1,000.00
	2,356.94

No Liabilities.

NUMBER OF MEMBERS BY COUNTIES

	Paid	Hon.
Allendale	7	
Aiken	6	
Anderson	42	6
Abbeville	9	2
Bamberg	12	
Barnwell	4	1
Berkeley	4	
Beaufort	6	
Chesterfield	7	
Clarendon	4	
Colleton	6	
Columbia	90	12
Cherokee	10	3
Chester	8	4
Charleston	82	4
Dorchester	7	
Dillon	8	
Darlington	14	1
Edgefield	2	
Florence	33	1
Fairfield	4	
Greenwood	18	
Georgetown	3	
Greenville	90	5
Horry	10	
Hampton	8	
Kershaw	13	
Laurens	18	4
Lexington	3	1
McCormick	2	
Marlboro	11	1
Marion	12	
Newberry	20	2
Orangeburg	22	1
Oconee	6	4
Pickens	14	2
Spartanburg	63	3
Sumter	17	5
Saluda	4	
Union	10	1
Williamsburg	10	
York	27	4
	746	
Honorary Fellows	67	
	813	

On motion, Dr. Harmon's report was accepted as information.

(To Be Continued)

STUDIES OF ASTHMA

Abraham Colmes and Francis M. Rackemann, Boston (Journal A. M. A., July 19, 1930), report three patients who illustrate several important features of allergy. First, they demonstrate the clinical importance of noting the criteria of allergy. It was the finding of a positive family history of allergy which led later to the finding of positive skin tests and to the relief of symptoms when the corresponding allergens were eliminated. The occurrence of wheezing (asthma) in all the cases as a later manifestation may be regarded as confirmation of the allergic background. Second, the onset during the acute respiratory infection needs comment. In many instances, an existing hypersensitiveness manifests itself only in the course of an acute infection, so that contact with the dog, for example, during a "cold" results in asthma, while the same contact in the absence of a cold fails to produce symptoms. The infection can evidently lower the threshold in some way to make a slight exposure adequate to cause trouble. Third, allergic cough (without the presence of wheezing or rales in the chest) has not been emphasized in the literature. Fourth, the variations in the clinical manifestations of disease in the three cases are easily explained by the assumption that they represent different degrees or stages in the amount of secondary bronchial infection. The first case represents the simple "uninfected" type. In the second, chronic bronchitis and emphysema complicate the picture. The third case illustrates well the possibility that hypersensitiveness to various dusts may be a seriously complicating factor in pulmonary disease of any kind. Fifth, when hypersensitiveness forms the background in pulmonary or nasal disease, the recognition and elimination of the offending allergen may be followed by marked amelioration of the disease, even in its advanced stage.

DRUG ADDICTS

Drug and Alcoholic patients are humanely and successfully treated in Glenwood Park Sanitarium, Greensboro,, N. C.; reprints of articles mailed upon request. Address

W. C. ASHWORTH, M. D., Owner
Greensboro, N. C.

WOMAN'S AUXILIARY
South Carolina Medical Association

OFFICERS

President, Mrs. W. H. Nardin ..... Anderson
First Vice-President, Mrs. L. O. Mauldin ..... Greenville
Second Vice-President, Mrs. Carl B. Epps ..... Sumter
Recording Secretary, Mrs. C. W. Evatt ..... Greenville
Corresponding Secretary, Mrs. T. R. Gaines ..... Anderson
Treasurer, Mrs. J. W. Bell ..... Walhalla

COMMITTEE CHAIRMEN

Publicity, Mrs. W. C. Abel ..... Columbia
Extension, Mrs. William Boyd ..... Columbia
Historical, Mrs. H. M. Stuckey ..... Sumter
Hygeia, Mrs. J. R. Miller ..... Rock Hill
Legislative, Mrs. M. L. Parler ..... Wedgefield

COUNSELLORS

District 1. Mrs. W. W. Wild ..... North Charleston
District 2. Mrs. Ernest Cooper, ... State Park, Columbia
District 3.
District 4. Mrs. F. G. James ..... Geer
District5 .Mrs. A. W. Humphries ..... Camden
District 6.
District 7. Mrs. D. O. Winter ..... Sumter
District 8.

Anderson, S. C.,
June 6, 1930.

To The Woman's Auxiliary
per—
Mrs. L. O. Mauldin, 1st Vice President.

Whereas our Constitution controls the term of office for the President and mine has automatically expired. I offer this reminder of the fact in the form of my resignation, to become effective at once.

It has been a pleasure to serve and I am grateful for the loyalty and cooperation of all who were associated with me in the work.

My interest in the Auxiliary will continue and my desire for its success is sincere. With thanks and cordial good will to all interested.

Minnie F. Nardin,
(Retiring President).

It is a source of keen regret that we give Mrs. Nardin up as our President. She has served us for two years and served well. I am sure each member of the Auxiliary appreciates her service.

According to the Constitution when a President resigns the 1st Vice President becomes Acting President. One year ago at our annual convention, at Charleston, S. C., when you honored me with the office of 1st Vice President I felt a rare pleasure and privilege had come to me. It seemed that my time had come to serve in an office that entailed only slight duties. But now it seems that time has come for real service. It has been a pleasure to serve you as 1st Vice President and may I ask that you give me the same loyal cooperation you have so willingly given our President, Mrs. Nardin. The success of any organization depends upon its members. The officers can not "carry on" without the support of each member at all times. I pledge to you my best efforts and I shall endeavor to serve you at all times.

Yours for service,
Mrs. L. O. Mauldin,
Acting President.

500 Petigru St.,
Greenville, S. C.

SOCIETY REPORTS

MINUTES OF THE REGULAR MONTHLY MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY HELD IN THE LECTURE HALL OF THE CITY HOSPITAL, JUNE 2nd, 1930

The meeting was called to order by the President, Dr. J. D. Guess at 8:30 P. M., with about forty members present.

The minutes of the last meeting were read and approved.

Reports of clinical cases were then called for. Dr. Carpenter reported a case of bilateral congenital ectropion. Dr. Hearin reported a case of ruptured tubal pregnancy with pyosalpinx of the opposite tube in which post-operative intestinal obstruction occurred. Dr. Grimball reported a case of bacillary dysentery followed by intussusception of the large bowel. Dr. Carpenter reported a case of persistent nose bleed which began two weeks previously to the time the patient came under his care. The onset came with chills and temperature. The Widal was negative, and in spite of blood transfusion, the patient died: discussed by Drs. Wilson, Wilkinson, Evatt, Hugh Smith and W. T. Brockman.

The President then called upon Dr. T. R. W. Wilson who presented a very informing talk on "Some Observations in Laboratory Work in Relation to Diagnosis." Dr. Wilson first stated that the early diagnosis of syphilis is next to impossible as early reporting to the physician by the patient is not done. The dark field examination was urged in every case of suspected early lesions. It was then stated that the renal function tests are not what they should be on account of the tendency to give the phenolsulphonephthalein subcutaneously instead of intramuscularly. The best method of the administration of phenolsulphonephthalein is the intravenous method. He also stated that patients in coma give faulty tests because they are unable to take fluids. In event of comatose patients, fluids should be given into the colon, and this should be followed by the intravenous administration of the dye. It was also mentioned that it was necessary to collect the urine specimens at the stated and required intervals, care being taken not to collect them too early or too late.

Dr. Wilson then mentioned that the normal leukocyte count is now considered to be 8,000, with 70 per cent polymorphonuclears. The polymorphonuclear count should increase one per cent for each increase of 1,000 leukocytes. The Arneth index is valuable, as a high Arneth index is a valuable indication of a bad prognosis.

In reference to chronic appendicitis, Dr. Wilson called attention to the fact that the gross examination of the appendix may show little or nothing of pathological interest, but microscopically there are a number of lymphocytes in the submucosa and fibrosis and eosinophiles in the mucosa. The ordinary bacterial flora of the intestine is observed in these infections. Discussed by Drs. Evatt, Powe and Pollitzer; closed by Dr. Wilson.

As the next essayist of the evening, Dr. Humphrey D. Wolfe presented a most interesting discussion on "Some Interesting Cases Recently Diagnosed by X-Ray." Dr. Wolfe first paid tribute to Dr. Carpenter's splendid work with the injection of Lipiodol into the paranasal sinuses. Dr. Wolfe described a case in which X-ray diagnosed a blood-clot pressing on the brain substance. He then mentioned the inadvisability of interns being required to make X-ray diagnoses. Proper interpretations of X-ray plates are always necessary, and these require the skill of an experienced roentgenologist. Dr. Wolfe then exhibited numerous X-ray films giving the diagnosis of each case. He recommended that stereoscopics be done of all questionable areas.

The Secretary then read a communication from Mrs. Margaret Sanger, Chairman of the National Committee on Federal Legislation for Birth Control relative to a bill before Congress allowing the medical profession to desseminate certain knowledge relative to contraception. Dr. W. L. Bates moved that the communication be received as information; there was no second to Dr. Bates' motion. Discussed by Drs. Tyler and Pollitzer. Dr. Pollitzer moved that the Society go on record as endorsing this Committee's efforts; seconded by Dr. Hugh Smith and carried. This measure was discussed before passage by Drs. C. O. Bates, Wilkinson, W. L. Bates, Hearin and Guess.

The Secretary then read a letter from the Secretary of the Alabama State Medical Assn. relative to the discontinuance of Physician's Liability Insurance in the State of Alabama by the Aetna Insurance Co. It was moved, seconded and carried that the President and Secretary of the Greenville County Medical Society confer with the William Goldsmith Co. of Greenville in regards to this matter and report back at the next meeting; seconded and carried.

There being no further business the meeting adjourned.

Irving S. Barksdale, M.D.,
Secretary.

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL TUESDAY EVENING, JUNE 24th, 1930, AT 8:30 O'CLOCK

The meeting was called to order by the President, Dr. J. Sumter Rhame.

Present: Doctors: Beach; Burn; Byrnes; Cain; Cathcart; Chamberlain; Deas; Jackson; Jenkins; Mitchell; Palmer; Pope; W. H. Price; Rhame; W. M. Rhett; Richards; W. A. Smith; Waring; Whaley; Hope; I. R. Wilson, Jr.; Sughrue; Sams. (23)

Guests: Dr. C. B. Woods, of the Medical College.

The minutes of the meeting of June 10th were read and confirmed.

Under Reports of Officers and Committees, the Secretary read the following letter from the Executive Secretary, Charleston County Tuberculosis Association:

Charleston County Tuberculosis Association,
70 Society Street.

24 June 1930.

Dr. J. S. Rhame, President
Medical Society of South Carolina
Charleston, S. C.
Dear Dr. Rhame:

It has been the policy of the Charleston County Tuberculosis Association to ask the endorsement of the Medical Society of South Carolina for the Association's work in the interest of tuberculos's control and eradication in Charleston County.

Pursuant to this course, I am writing to tell you of the latest plan for increasing its usefulness and to ask for this your approval and cooperation.

The Association has followed all the avenues for case finding which exist at the present time but they are inadequate in locating many active cases of tuberculosis, if the death rate is accepted as an index to the prevalence of the disease. In its effort to improve this condition, the Association will on August 1st employ Dr. P. M. Huggin as staff clinician. Dr. Huggin is a recent graduate of the Medical College of South Carolina and has been an interne at Pinehaven for the past two years. He expects to spend a time at the Bellevue Tuberculosis Clinic so as to fit himself further for his new duties.

The Association then will increase the number of diagnostic clinics in the city from one to two each week, at Roper Hospital, and establish four permanent clinic stations in outlying districts of the county. It contemplates also some work in the schools, to include amongst other things the tuberculin testing of groups of children.

The President of our Association, Dr. G. McF. Mood, and our Medical Director, Dr. W. Atmar Smith, will be glad, I am sure, to supply further details of the plan, should you wish fuller information.

With appreciation of your cooperation in the past and the assurance that it is always the wish of the Association to work in harmony with and under the guidance of the Medical Profession, I am

Yours very truly,
Eleanor L. Halsey,
Mrs. Ashley Halsey,
Exec. Secretary Charleston County Tuberculosis Assn.

It was moved, seconded, and carried that the Medical Society endorse the project, as contained in the letter from the Charleston County Tuberculosis Association, and that the members cooperate in carrying out the aim set forth.

Under Miscellaneous Business, Dr. R. S. Cathcart stated that a few years ago a beneficent citizen of Charleston donated to the free wards of the Roper Hospital electric fans, and has annually paid the cost of maintaining these. The donor now desires to perpetuate this gift to the hospital by making an endowment, the proceeds from which to cover the cost of operating and maintaining the fans. Dr. Cathcart stated that the donor does not wish her name known to the public in this matter. He then submitted the following deed of trust, which he said had been drawn up by the Society's attorney, Mr. George H. Moffett:

AGREEMENT BETWEEN and THE MEDICAL SOCIETY OF SOUTH CAROLINA, TRUSTEE UNDER THE WILL OF THOMAS ROPER.

STATE OF SOUTH CAROLINA.

THIS AGREEMENT made and entered into at Charleston, S. C., in duplicate, this day of June, 1930, by and between , of Charleston, S. C., Party of the First Part, and the Medical Society of South Carolina, Trustee under the Will of Thomas Roper, Party of the Second Part,

WITNESSETH:

The said hereby gives and grants the sum of Fifteen Thousand ($15,000.00) Dollars unto the Medical Society of South Carolina, Trustee under the Will of Thomas Roper, IN TRUST to invest the same in such securities as by Law said party of the second part is authorized to invest with power to change said investments from time to time as may be necessary. The said funds, investments and reinvestments thereof to be kept in a separate fund, the net income arising therefrom to be used to pay the expenses of operating the electric fans heretofore donated by the party of the first part to the party of the second part and located in the Roper

Hospital in the City of Charleston. After paying such expenses of operation, should there be any surplus of income, such surplus to be kept and used to repair, replace or buy additional fans as may be necessary, should the surplus of income warrant such expenditures. It is understood and agreed that all of the fans are to be used in the free wards of the Roper Hospital.

In the event that the Roper Hospital shall give up the use of the fans, the Fifteen Thousand ($15,000.00) Dollars herein donated shall revert back to the Estate of .

The Medical Society of South Carolina, Trustee under the Will of Thomas Roper, hereby accepts the above gift upon the conditions above set out.

IN WITNESS WHEREOF the party of the first part has hereunto set her Hand and Seal, and the party of the second part has caused this Agreement to be executed by its duly qualified officers and its corporate seal affixed the day and year first above written.

Signed, Sealed and Delivered
In the Presence of:

_____ (L.S.)

The Medical Society of South Carolina, Trustee under Will of Thomas Roper,
By

Dr. Cathcart then moved as follows: "Moved that the Medical Society of South Carolina accepts the Trust as deeded by and hereby instructs the president and secretary to execute this acceptance on the part of the Society. Also, that these officers, after receiving the funds, shall turn them over to the Board of Finance, which will invest it in accordance with the terms of the trust." This was unanimously carried. It was moved, seconded and carried that the Secretary write to the donor of this splendid charity and express to her the thanks and appreciation of the Medical Society.

The Secretary brought to the attention of the members of the Society their eligibility to obtain group insurance under the group policy which the Board of Commissioners had taken out with the Aetna Insurance Company for the protection of the employees of the hospital. He stated that only twenty-five members have availed themselves of this opportunity. He pointed out that each member could secure as much as twenty-five hundred ($2500.00) dollars worth of insurance without examination, and that the rates were very reasonable. He further stated that he would have the cards sent to all members who have not taken out the policy, in order that they might do so if they so desire.

Dr. J. M. Pope was present, and signed the constitution.

At 9:00 P. M., the Scientific Program was taken up.

Dr. M. W. Beach reported a case of a colored boy about nine years of age, who was suffering with a general cuppurated lymphadenitis, complicated with orchitis, arthritis, otitis media and enlarged liver. The etiological diagnosis was not made after a thorough clinical and laboratory study. This was discussed by Dr. W. M. Rhett, Dr. I. R. Wilson, and Dr. F. G. Cain.

Dr. W. M. Rhett reported and exhibited a case of Hirschsprung's disease. He discussed the causes and requested the Society to discuss the modes of treatment. Discussed by Drs. Whaley, Deas, Cathcart, Beach, and I. R. Wilson, Dr. Rhett closing.

Dr. J. L. Waring exhibited a case of pituitary tumor in a colored boy of twelve years. This was discussed by Drs. Pope, Beach, Chamberlain and Jenkins, Dr. Waring closing.

There being no further business, the meeting adjourned.

W. Atmar Smith, M.D.,
Secretary.

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL TUESDAY EVENING, JUNE 10th, AT 8:30 O'CLOCK

The meeting was called to order by the President, Dr. J. Sumter Rhame.

Present: Doctors: Allen; A. E. Baker; Ball; Beach; Buist; Burn; Byrnes; Cain; Cannon; Cathcart; Chamberlain; Deas; Jackson; W. H. Johnson; Kollock; Lynch; McInnes; Maguire; Mitchell; O'Driscoll; Palmer; E. F. Parker; Prioleau; Rhame; W. M. Rhett; Richards; Rutledge; Sanders; W. A. Smith; Waring; I. R. Wilson; Whaley; W. H. S. Speissegger; Hope; Sughrue; Bold. (36).

Guests: Dr. Roe E. Remington, Dr. Griggs of Chesterfield, and members of the family of Dr. R. S. Cathcart.

The minutes of the meeting of May 27th were read and confirmed.

There was no business.

At 9:00 P. M., Dr. Edward Rutledge, Chairman of the Committee which had been appointed by the President to arrange for the painting of the portrait of Dr. R. S. Cathcart, reported that the matter had been completed, the portrait having been painted by Mrs. E. S. Nash, and that arrangements had been made for unveiling the portrait at this time. Dr. Rutledge then called upon Dr. E. F. Parker to perform this ceremony.

Dr. Parker, in unveiling the portrait, spoke of the splendid service that Dr. Cathcart had rendered the Roper Hospital and the Medical Society. He was the moving spirit in negotiating with City Council in the building of the present hospital. His tact, fine judgment, and administrative ability have contributed in a large way to the develop-

ment of every phase of the hospital's expansion. As Chairman of the Board of Finance, by his tact, forcefulness and financial ability he has rendered service of immeasurable value to this Society. Dr. Parker congratulated Dr. Cathcart on being the first man in the history of the Society to have its members honor him in such a fashion, and he congratulated the Society for its generous recognition of the services of such a member.

Dr. Cannon, a member of the committee, spoke of the great satisfaction that it had given him to contribute his services in a small way to the man on the canvas.

Dr. W. C. O'Driscoll arose to express his personal feeling of gratification to see this honor bestowed.

Dr. Cathcart then arose and expressed his appreciation of the action of the Society. He said that he was profoundly affected by this great honor, and what service he had rendered to the hospital and the Society was done because of the love he had for them, and for the esteem in which he held the members of the Society.

At the conclusion of this ceremony, the Scientific Program was taken up.

Dr. Sylvia Allen reported a well worked up case of thyroid hyperactivity with psychosis. This was discussed by Dr. W. H. Prioleau and Dr. K. M. Lynch.

Dr. G. P. Richards reported an interesting case of convulsions in a child. Discussed by Dr. A. E. Baker, Sr.

Dr. J. D. Whaley reported a case of urinary calculus.

Dr. John Sughrue read a short paper on prenatal infection of the breasts, based on cases seen in the Out-Patient Department.

Dr. R. M. Hope reported a case of carcinoma of the larynx.

Dr. W. H. Speissegger reported a case of inguinal abscess, presenting difficulties in diagnosis.

There being no further business, the meeting adjourned.

W. Atmar Smith, M.D.,
Secretary.

COLUMBIA MEDICAL SOCIETY

Meeting called to order by the President J. Heyward Gibbes at 8:35 P. M. Monday, June 9, 1930.

Doctor Lewis A. Buie the invited guest from Mayo Clinic, Rochester, Minn. talked on the Diseases of the Rectum. His discussion was illustrated with lantern slides. His subjects covered in particular were fistula, fissue, hemmorrhoids, cancer and chronic ulcerative colitis. Much emphasis was laid on the dentate margin of the rectum.

The discussion was opened by Dr. F. M. Durham. Others discussing the subject were Drs. Kibler, Hugh Wyman and Floyd Rodgers. Dr. Brice closed the discussion.

Motion made to have call meeting June 30th. Monday at 8:30 P. M. to hear Dr. Edward Mellanby of Sheffield, England (Professor of Physiological Chemistry, Sheffield, University).

About 48 members present and eight visitors.

Society adjourned at 10:45 P. M.

Respectfully submitted,
William Weston, Jr.,
Secretary

COLUMBIA MEDICAL SOCIETY

The Columbia Medical Society had the distinc honor and pleasure of hearing Dr. Edward Mel lanby, F.R.S. of Sheffield, England last evening June 30, at a special called meeting. His subjec was "Nutrition in Relation to Diseases." Hi. talk was illustrated by lantern slides showing animal experiments. These experiments have di rect relationship to the human as was explained and shown in the practical experience by Dr. Mellanby.

His first subject was "Vitamin D or irradiated Ergosterol in Relation to Rickets." In this connection the study of the teeth in development and disease was discoursed which work was done by Mrs. Mellanby.

Of peculiar interest to South Carolina the author talked on his idea of the cause of pellagra stating that he did not believe that yeast had very much influence as a preventive factor. He thinks that vitamin A plays a very important role and that it is a definite factor in the cord changes which one sees in pellagra. Dr. Mellanby complimented Dr. Goldberger on the work that he had done in relation to this disease.

Cereals were discussed in details and Dr. Mellanby believes that they have a definite relationship to the severity of the disease, particularly rickets, stating that he thinks they contain some toxic substance.

Pernicious anemia was also discussed and here Dr. Mellanby believes that there are two factors, the water soluble liver substance which has a bearing on the circulartory system and the fat soluble substance which has a relationship on the spinal cord.

Infections and their connections with the vitamin elements were talked about and he illustrated a reduction in the mortality rate of patients who were fed Carotene which is a substance rich in vitamin. Animal experiments were first done and proved a direct bearing.

The Columbia Medical Society deeply appreciated Dr. Mellanby's address. There were about 100 doctors present including Dr. Kenneth Lynch, President of the South Carolina Medical Association; Dr. Charles Mobley, President elect of the

South Carolina Medical Association; Dr. E. A. Hines, Secretary; Dr. Wilkie Jervey; Dr. Hugh Smith and many others outside of Columbia.

Very truly yours,
William Weston, Jr.,
Secretary.

COLUMBIA MEDICAL SOCIETY

Meeting called to order by E. L. Horger in the absence of the President and Vice President at 8:40 P. M.

Minutes of May 26th, 1930 read and adopted.

Dr. Harmon reported further on Library Committee stating that the Columbia Library Committee was arranging with Mrs. Woodrow (owner) to have extension of building added.

The Collection Committee asked for further time to investigate.

The following names were proposed for membership: Dr. C. H. Epting and Dr. Chapman J. Millings.

The Clinical Pathological Conference case was opened by Dr. Joe Dillard who gave a good discussion and whose diagnosis (of brain abscess) was confirmed by most of those entering the discussion who were Drs. McDonald, Madden, McIntosh and W. R. Barron.

Case was closed by Dr. Plowden who demonstrated under the microscope a spindle cell sarcoma which origin was the meninges.

Dr. Horger announced the special meeting Monday, June 30th to hear Dr. Edward Mellanby of Sheffield, England.

Twenty-two members present.

Society adjourned at 9:18 P. M.

Respectfully submitted,
William Weston, Jr.,
Secretary.

MEDICAL SOCIETY OF SOUTH CAROLINA HOLDS INTERESTING MEETING

News and Courier, July 2, 1930

Mellanby Lauds Food Laboratory

Noted English Authority Addresses Medical Society of South Carolina

The laboratory of the South Carolina natural resources commission here represents the first step forward in a movement that should attain considerable proportions, in the opinion of Dr. Edward Mellanby, professor of physiological chemistry in the University of Sheffield, Sheffield, England.

Dr. Mellanby visited Charleston yesterday at the invitation of Dr. William Weston, chairman of the South Carolina food research commission in Columbia, who accompanied him to the city for an inspection of the laboratory in charge of Dr. Roe E. Remington. Dr. Mellanby last night addressed members of the Medical Society of South Carolina and their guests in the society's hall in the Roper hospital, on the possibilities contained in the adjustment of diet.

Research of the type being conducted by Dr. Remington and his staff is of great value, Dr. Mellanby said, praising the efficiency of those conducting operations. The equipment is excellent, he said, and complimented the workers both on their ability and on their hospitality. The possibilities are infinite, and the research into goitre control and other matters relative to food content should be carried far, he explained, expressing his wonder that work of this character was not more general.

Dr. Mellanby brought years of experience in nutrition to the speech given before the Medical society, and which was marked by the introduction of a number of revolutionary ideas. Control, not only of the calcification of bones and teeth, may be obtained through the regulation of diet, but diseases of infectious nature may be checked and prevented. The effect of nutrition on the curbing of certain diseases of more or less rare nature had long been realized, he explained, adding that research had shown, of recent years, that the subject was of equal importance in the control of diseases of the most common character.

The importance of vitamin D for aiding in calcification was brought out, both with regard to preventing bone infection and in checking this once it had already set in. Dr. Mellanby went so far as to say that dental defects could not be prevented, but could be cured following their inception through the proper administration of this vitamin in the diet.

Speaks of Pellagra

Pellagra, always a problem in this section, may be curbed through attention to the diet, vitamin A playing a large part in this, as in the case of all skin infections. Germ infection attacking the body organs may likewise be checked, he said, attributing to the possibilities of diet control the chance that it may serve to prevent and possibly cure such diseases as pneumonia. A newly discovered element called carotene is of value in connection with the treatment of skin and organic infections, he explained.

Lantern slides were used throughout, much of the data contained in the charts shown having been prepared by Mrs. Mellanby, who accompanied her husband to Charleston, and was present at last night's meeting. The speaker was introduced by Dr. Mazyck Ravenel, professor of hygiene at the University of Missouri, and a former resident of Charleston. Dr. J. Sumter Rhame, president of the Medical society, presided.

COLUMBIA MEDICAL SOCIETY

Second regular monthly meeting Columbia Medical Society called to order by the President, Dr. J. Heyward Gibbes, at 8:30 P. M. May 26, 1930.

Dr. Harmon reported further as chairman of the library committee that the Columbia Public Library would be glad to have us. That they had appointed a committee to work out the details. Dr. Harmon introduced a subject to the medical society that was supposed to aid and abett the accounts for doctors. The management of this concern is to be under the direction of Mr. D. S. McKnight. Discussed by Drs. Young, Zemp, Rodgers, McIntosh and Routh. Dr. Fouche moved that the society hear from Mr. McKnight. Mr. McKnight in a brief discussion talked of a compellation of the delinquent accounts and the method by which other doctors joining this organization would be able to secure the names of those persons who were in a habit to go from one doctor to another without paying. Motion that committee be appointed and report back to the society was passed. The president appointed Dr. Young chairman, Dr. Harmon and Dr. Rodgers.

Dr. Routh moved that the Columbia Medical Society go on record as endorsing an anti-pellagra campaign in Richland County. Dr. Setzler explained the conditions in Richland County in regards to pellagra and what they would do if this society endorses the campaign. Discussed by Dr. Harmon that the council of the Medical Association of South Carolina approves of this campaign. Motion passed.

Dr. Miles W. Cheatem elected a member.

Dr. Walter J. Bristow elected as a representative of the Columbia Medical Society to the Columbia Community Chest Council.

The clinical pathological conference was opened by Dr. Emmett Madden. His differential diagnoses were brief, clear and concise. His clinical diagnosis was acute myelitis of infectious origin. The pathological discussion was closed by Dr. Plowden with the spinal cord specimen corroborating the clinical diagnosis.

Thirty-five members present. Society adjourned 10:15.

Respectfully submitted,

William Weston, Jr.,
Secretary.

COLUMBIA MEDICAL SOCIETY

Meeting called to order by the President J. Heyward Gibbes, at 8:35 P. M. May 12, 1930. This being the first regular meeting of month (May) was a scientific one.

First paper a study that we have a more thorough understanding in handling the injured by Dr. Sam'l E. Harmon.

Paper was opened for discussion by Drs. Guerry and Baggott. Others discussing it were Drs. Plowden, Taylor, Moore and Black. Dr. Harmon thanked the men for their discussion and closed the subject.

Second on the scientific program was Gall Bladder Diagnosis by Dr. T. A. Pitts who demonstrated his talk with lantern drawings and plates. Opened for discussion by Dr. H. W. Rice. Further discussed by Drs. Mosteeler, Rodgers, Zemp, McIntosh, Harmon, Mayer and Madden. Closed by Dr. Pitts.

Announcement by Dr. W. R. Barron of Dr. Barron's presentation of Diseases of the Rectum on June 9th, 1930 before the Columbia Medical Society.

Dr. J. Heyward Gibbes reminded the society of the President's reception on May 16, 1930 7:30 P. M.

Forty-one members present. Two visitors. Society adjourned at 11 P. M.

Respectfully submitted,

William Weston, Jr.,
Secretary.

MEMBERS OF MARION COUNTY MEDICAL SOCIETY MEET AND DINE AT VAUGHN HOTEL

The Marion County Medical Society met at the Vaughn Hotel, Mullins, Tuesday evening, June 17, with the following answering roll call:

Drs. F. L. Martin, J. L. Martin, L. M. McMillan, L. S. Miles, B. M. Montgomery, N. N. Schofield, R. B. Stith, and H. B. Webb.

The matter of acquiring a club house for usage by members of the society as a place of gathering, both for social functions and scientific sessions, was again discussed; and in furtherance of such cause the Chair appointed Drs. L. M. McMillan and F. L. Martin to constitute a committee entrusted with the duty of investigating the probable rental of a building at Gallivants Ferry, known by members of this society to be well adapted to our purpose.

The remainder of the session was devoted to the discussion of recommendations embodied in report of Committee On Medical Economics, the South Carolina Medical Association, which report was submitted to the House of Delegates, and adopted by this body when offered in resolution, at Florence, May 6, 1930.

In accepting these resolutions the society appointed the following Public Health Committee: Drs. L. M. McMillan, Z. G. Smith, and R. B. Stith, —the duty of which committee it shall be to supervise and cooperate with any and all agencies doing work of a preventive or public health nature in Marion county.

B. M. Montgomery,
Secretary Marion County Medical Society.

RIDGE MEDICAL SOCIETY MEETS

The Ridge Medical Society met Monday night the sixteenth of June, with a fair attendance.

Dr. R. H. Timmerman exhibited a case of pellagra with marked symptoms on the feet of a young white woman.

He also exhibited an old negro man with one foot that had been partially amputated years ago and which had been recently severely mashed.

Dr. W. P. Timmerman presented a case of suspected tuberculosis in a young white man.

Dr. Martin Woodward, County Health Officer, of Lexington County read a comprehensive paper on the proper handling of food, especially, milk and green vegetables and water. He also spoke of surface toilets and their evils.

Dr. Ernest Cooper of the State Tubercular Sanitarium read an instructive paper on Childhood Tuberculosis.

Dr. Geo. H. Bunch of Columbia, Ex-President of the South Carolina Medical Association gave an interesting discourse on spinal anesthesia.

Drs. A. R. Nicholson of Edgefield, J. D. Waters of Saluda and A. L. Ballenger of Batesburg were appointed a committee on Public Health.

Supper was served in the Commercial Hotel where merriment and good fellowship reigned.

The Ladies Auxiliary met with Mrs. W. P. Timmerman.

The ladies had an interesting and varied program and were addressed by Mrs. Dr. E. Cooper of Columbia, District Councilor.

SPARTANBURG COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Spartanburg County Medical Society was held Monday, June 23, 1930, 8 P. M. at the General Hospital. About 30 members and guest were present.

Dr. F. H. Sanders gave a very interesting discussion of the ineidence, diagnosis and medical treatment of gall bladder disease. Dr. Fred Crow read a very able paper on the diagnosis and surgical treatment of cholecystitis. Dr. T. A. Pitts of Columbia, S. C., showed some illustrations and lantern slides and gave a lecture on the x-ray examination as an aid in the diagnosis of gall bladder disease.

This symposium was discussed by Dr. J. J. Lindsay and Dr. Cecil Rigby.

Dr. T. A. Pitts then announced that he had been using a new drug called Uroselectan for intravenous pyelography. Dr. Pitts also showed x-ray films of ten patients to whom this drug had been given intravenously. The kidney pelves, u eters and bladder of each patient were clearly outlined. Dr. Pitts stated that this was also a kidney function test as the total quantity of uro-selectan in the urine could be determined.

Dr. Finney moved that the committee on public health cooperate more effectively with the County Health Officers and the State Board of Health.

There being no further business the meeting adjourned.

C. W. Bailey, Pres.
W. M. Sheridan, Sec.-Tres.

REGULAR MONTHLY MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY HELD IN THE LECTURE HALL, CITY HOSPITAL, MONDAY, JULY 2, 1930

The meeting was called to order by the President, Dr. Guess at 8:30 P. M. with the following members present:

Drs. Guess, Curry, J. M. Fewell, W. S. Fewell, Tyler, W. T. Brockman, Jervey, Jr., Blakey, Evatt, Anderson, Brown, Murray, Metz, Pollitzer, Simmons, Benson, Curran B. Earle, Baylis H. Earle, Richardson, Grimball, Edwards, McCalla, Mauldin, Carpenter, McLean, Watson, J. W. White, DuPree, Goldsmith, Hugh Smith, W. L. Bates, Wilkinson, Davis, and Barksdale.

The minutes of the last meeting were read and approved.

Reports of Clinical Cases were then called for. Dr. Davis reported a case of partial prostatectomy, also one of haemorrhage from the prostate, which was said to be due to malignancy of the gland.

Dr. Brown reported a case of arachnidism of penis; the bite was followed with very much pain from the waist down, abdomen was rigid, simulating an acute abdomen. One-quarter grain morphine gave no relief, more of the drug was necessary. White blood count was 18,000, polymorphonuclear count, 75%. Dr. Brown cautioned against opening the abdomen in these cases, stressing the importance of a correct diagnosis. Discussed by Drs. C. B. Earle, Richardson, and Guess.

The President then called upon Dr. R. M. Pollitzer who presented a splendid paper on "Pitfalls of Paediatric Diagnosis." The essayist mentioned that paediatric diagnosis is different from the diagnosis of disease in adult patients. Mistakes in diagnosis are due to carelessness or ignorance, more often to carelessness. Dr. Pollitzer mentioned that the newborn has the least consideration of all—the mother has all of the attention from the physician and the infant has little or none at all. Newborns frequently have temperature, the commonest cause being inanition. Water should be given freely. Cyanosis is also very common in the newborn, and is most often attributed to atelectasis, brain injury, prematurity or a weak heart.

Incessant crying was also mentioned as a bad sign; it is usually the result of hunger and not colic. Such an infant should be weighed before

and after nursing. Over-abundance of mother's milk may mean an early exhaustion of her supply. The weighing of babies at frequent intervals in early life is mandatory, and should be done after all clothes have been removed.

Dr. Pollitzer then advised against the use of the various and sundry artificial foods unless their composition is definitely known. It is also important to know the baby's needs, which can only be found out by examining the baby. Diagnosis and treatment over the telephone is a malicious practice and should be discontinued. It was stated that telephone prescribing is bad, but telephone feeding is worse.

Vomiting and diarrhoea in an infant may mean anything, again it becomes very necessary to examine the baby thoroughly. Tonsillitis is very common, and all possible causes of illness should be thoroughly sought out by the physician.

Any case of malnutrition requires an accurate diagnosis. It is so often due to syphilis, tonsillitis, tuberculosis.

Any paralysis or pseudo-paralysis is too often called poliomyelitis. These conditions may be caused by scurvy, syphilis, or may be post-diphtheritic in nature.

All rashes on the baby are not due to syphilis, and are called syphilis too often. We are too prone to call rashes scarlet fever.

In case of convulsions, we should endeavor to find out the cause.

Oedema in an infant is often due to the lack of Vitamin B.

The diagnosis of pneumonia is often made too soon.

Children with fever are apt to have reddening of the ear drums. These should not be opened unnecessarily; pus formation should be waited for. An unresolved pneumonia is rare; empyema should be thought of instead of an unresolved pneumonia.

Consolidation of the lung is often confused with appendicitis.

Teething is too often blamed for illness in a child.

The next paper of the evening was ably presented by Dr. John F. Simmons. The subject was "Infant Feeding."

Dr. Simmons first discussed the feeding of an infant with diarrhoea. The commonest mistake made in practice is to feed the child its regular diet too soon. The best practice is to starve for 36-48 hours, and should apply to both breast and artificially fed babies; adequate fluids should be given, such as 5-10% glucose by the various routes and the oral administration of orange-juice. What to feed after the starvation period depends on the type of intestinal infection. Stools of a green color, of an acid reaction and containing mucous are apt to be due to excessive carbohydrate intake; a high protein diet is indicated here. About 60% of diarrhoeas of gastro-intestinal origin can be controlled by protein milk, on account of the low buffer value of acid milk and to the low sugar content. It is not necessary to dilute protein milk; the concentrated form is to be preferred; the same is true for lactic acid feeding.

Breast-fed infants with diarrhoea should be starved 24-36 hours. If the diarrhoea is checked, lactose is apt to be the cause of it; protein milk should be substituted for a while.

If the diarrhoea is attended with vomiting, all food should be stopped. The infant should be given gastric lavage, colonic irrigation, and intraperitoneal fluid, if necessary.

In regard to the mother who cannot nurse her baby, Dr. Simmons suggests that she be made to state her reasons first. The baby should be weighed before and after feeding in the doctor's presence. It is important to strip the breasts after feeding. Babies on a four hour feeding schedule seem to be better nourished. Two hours are required for the stomach to empty mother's milk, and two and one half hours are required for it to empty modified cow's milk. Discussed by Drs. Grimball, Davis, W. S. Fewell, C. B. Earle, W. T. Brockman, Guess, B. H. Earle; closed by Drs. Pollitzer and Simmons.

Dr. Guess reported favorably on the status of the members liability insurance with the Aetna Co.

Dr. Guess appointed the following members to serve on the State Medical Association Meeting Committee: Drs. Carpenter, Chairman, Murray, Curran B. Earle, Mauldin and Wilkinson.

Dr. Tyler announced the Tuberculosis Clinics to be held at the State Park on July 30th.

There being no further business, the meeting adjourned.

Irving S. Barksdale, M.D.,
Secretary.

ANDERSON COUNTY MEDICAL SOCIETY

The regular meeting of the Anderson County Medical Society was held Wednesday July 9, 1930, 12 noon, at the John C. Calhoun Hotel, Anderson, S. C. Dr. E. O. Hentz, Vice-President, called the meeting to order with the following members present-

Doctors: Goodman Bare, D. J. Barton, C. S. Breedin, C. H. Burton, Grady S. Clinkscales, G. W. Chambers, H. M. Daniel, S. C. Dean, T. R. Gaines, B. A. Henry, E. O. Hentz, J. M. Land, Frank Lander, W. T. Lander, J. W. Martin, Lee W. Milford, J. O. Sanders, A. L. Smethers, Wade Thompson, J. B. Townsend, J. E. Watson, Frank Wrenn, J. R. Young, J. C. Harris.

The minutes of the June meeting were read and approved.

The Society heard the report of the Committee on Public Health. The resolutions drawn up by this committee were read before the Society by Dr. W. T. Lander. These resolutions were not adopted at this meeting. Dr. J. R. Young made motion that this matter be deferred to next meeting of Medical Society due to the absence of the County Health Officer and that the matter be left with the Public Health Committee to decide upon any question that might come up between this and time of the next meeting, motion seconded and carried.

Under the head of business a bill for two luncheons ($10.00) at the John C. Calhoun Hotel for Public Health Committee was brought before the Society and motion was made by Dr. Frank Lander that this bill be paid. It was seconded and carried.

It was voted by the Society that the August meeting be dispensed with.

Dr. E. O. Hentz was in charge of the "Scientific Program" and had as his subject—"The Heart During Pregnancy." This was a very interesting paper and was fully discussed by Dr. J. O. Sanders.

Society adjourned for the regular luncheon.

D. J. Barton, Secretary.

-:- NEWS ITEMS -:-

The Eastern Carolina Medical Association met at Myrtle Beach on July 17, and was presided over by Dr. D. W. Green of Conway. Owing to the illness of Dr. F. L. Martin of Mullins the Secretary, Dr. E. A. Hines of Seneca, Secretary of the State Medical Association took his place. Colonel H. B. Springs delivered the address of welcome. Among the speakers were Thomas M. Green, Wilmington, N. C.; Oren Moore, Charlotte, N. C.; J. Richard Allison, Columbia, S. C.; W. A. Mulherin, Augusta, Ga.; J. Heyward Gibbes, Columbia, S. C.; Henry Lee Sloan, Charlotte, N. C.; and O. T. Finklea, Florence, S. C.

Discussions were opened by D. L. McGuire, Charleston; Robert E. Seibels, Columbia; J. L. Ravenel, Florence; J. B. Sidbury, Wilmington; W. R. Mead, Florence; Simmons Lucas, Florence and James Ravenel, Charleston.

There were about seventy-five doctors present at the meeting.

Dr. W. P. Timmerman, Ex-President of the South Carolina Medical Association and Mayor of the city of Batesburg has returned from camp at Fort Bragg. Dr. Timmerman is a Major in the Medical Reserve.

Dr. Edgar A. Hines, Jr. of Seneca, S. C., who was recently elected Assistant to the Secretary Editor of the South Carolina Medical Association, has accepted the position of Resident Physician at the Spartanburg General Hospital. Dr. Hines entered upon his duties July 1.

The S. C. Tuberculosis Association working with the State Board of Health takes pleasure in announcing that on two days, July 30, 31st, clinics will be given at State Park Sanatorium for the South Carolina physicians. On Wednesday, 30th, Dr. Paul Ringer of Asheville will conduct the clinics. On Thursday, 31st, Dr. Horton Casparis, Professor of Pediatrics, Vanderbilt University will give them. The clinics will begin at 10 o'clock each morning. The Sanatorium will provide lunch for all visiting physicians on these two days. There will be no charge for the lunch or for the clinics.

The Committee hopes that the physicians of the State will avail themselves of this excellent opportunity to have the subject of tuberculosis presented by these prominent physicians. The Committee requests that all those who wish to attend the Institute notify Dr. Ernest Cooper, State Park, S. C. or the South Carolina Tuberculosis Association, 1218 Senate Street, Columbia, S. C.

R. M. Pollitzer, M.D.,
F. H. McLeod, M.D.,
G. T. Tyler, Jr., M.D., Chairman.

To My Colleagues, the Editors of the Medical Journals of the United States and Canada:

If you receive this in time and it is appropriate, will you publish in your journal that there will be a meeting in the ballroom of Belvedere Hotel in Baltimore, Maryland, Monday, Tuesday and Wednesday, September 15, 16 and 17, 1930, beginning Monday morning at ten o'clock and ending Wednesday evening at nine o'clock, daylight saving time. During these days there will be lantern-slide demonstrations, with four lanterns and screens, on the Diagnosis and Treatment of Diseases and Tumors of Bone.

The first day will be devoted to the fundamental and essential knowledge of the benign and malignant lesions of bone, such as osteitis fibrosa, giant-cell tumors, osteomyelitis, sarcoma and so forth. On the second day, the subject will be the different diseases of single bones, such as the lower end of the radius, vertebrae, etc. The third day will be reserved for the presentation of rare lesions of bone difficult to diagnose. Any member of the medical profession attending this meet-

ing may register such a case by addressing Miss Maude Walker, Sec'y. to Dr. Bloodgood, Surgical Pathological Laboratory, Johns Hopkins Hospital, Baltimore, Md., enclosing the X-ray films or lantern slides of them (if possible the latter) and sections of tissue, if any. Any member of the medical profession interested in the diagnosis and treatment of lesions of bone is invited.

On account of the size of the ballroom the number must be limited to 800.

Those who wish to attend should write the Belvedere Hotel and register, either requesting the usual rates for a single or double room with and without bath, or the special rates for three or more in a room with and without bath, and the special restaurant rates for a club breakfast, luncheon and dinner. You are advised to bring the answer received from the Manager of the Belvedere Hotel with you and present it when you register. For any further details in regard to this demonstration, address your letter to Miss Maude Walker, named above.

I am very anxious that this invitation should reach radiologists, surgeons, pathologists, and internists who are interested in the subject but have only rare opportunities to observe lesions of bone. In three sessions of two or two and one-half hours each, on three days, with four lanterns and a very remarkable and educational motion picture, the subject can be presented in an almost unforgetable way, emphasizing the essentials and fundamentals in the diagnosis and treatment of bone lesions. All cases registered for presentation on Wednesday, will be sent later to Dr. Bowman C. Crowell, Director of Clinical Research of the American College of Surgeons, who is Chairman of the Bone Sarcoma Committee. You should become familiar with this registration of sarcoma of bone, if you are not, because you can register all your cases there and receive the diagnosis of a committee, and you can send for groups of bone tumor cases which have been registered, for personal study.

It is impossible except in the largest clinics, for any radiologist, pathologist, surgeon, or internist, to become familiar with the changing clinical, X-ray and microscopic pictures of diseases and tumors of bone as they come under observation earlier and earlier after the first injury or first symptom, and to learn how to diagnose and treat them in the best way.

Sincerely yours,

Joseph C. Bloodgood.

Summer Diarrhea

The following formula provides a means of supplying the principal fuel utilized in the body for the production of heat and energy and furnishes immediately available nutrition well suited to protect the proteins of the body, to prevent rapid loss of weight, to resist the activity of putrefactive bacteria, and to favor a retention of fluids and salts in the body tissues:

Mellin's Food . . 4 level tablespoonfuls
Water (boiled, then cooled) . **16 fluidounces**

ACCEPTED AMERICAN MEDICAL ASSN. Committee on Foods

The usual custom is to give one to three ounces of this mixture every hour or two until the stools lessen in number and improve in character. The food mixture may then be gradually strengthened by substituting one ounce of skimmed milk for one ounce of water until the amount of skimmed milk is equal to the quantity of milk usually employed in normal conditions. Finally the fat of the milk may be gradually replaced, but as milk fat is likely to be digested with much difficulty after an attack of diarrhea it is good judgment to continue to leave out the cream until the baby has fully recovered.

Further details in relation to this subject and a supply of samples of Mellin's Food sent to physicians upon request.

Mellin's Food Company - - - Boston, Mass.

The Journal

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EDITORIAL

COMMITTEE APPOINTMENTS

After mature deliberation the President has appointed the various committees to serve the Association for the ensuing year. From the large number of enthusiastic replies received it appears that every interest of the State Medical Association will be carefully looked after during the coming year. The Secretary has already visited the Greenville County Medical Society and considered with them the preliminary steps for making the Greenville meeting in 1931 a spectacular success. It is not too much to hope that the attendance will reach the seven hundred mark which includes of course the Woman's Auxiliary. Every facility looking toward the comfort and convenience of the membership and their families will be provided for. The personnel of the committees in charge of the scientific program and the local arrangements have had a large experience in such matters and therefore it is a foregone conclusion that the next meeting in the far famed Piedmont section of the State will be satisfying in every particular. The following are the committees:

COMMITTEES, 1930-1931

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Dr. Douglas Jennings, Chairman, Bennettsville, S. C.
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Dr. J. G. Murray, Greenville, S. C.
Dr. Curran B. Earle, Greenville, S. C.
Dr. L. O. Mauldin, Greenville, S. C.
Dr. G. R. Wilkinson, Greenville, S. C.

ORIGINAL ARTICLES

*MYOCARDIAL FAILURE

R. J. Coney, M. D., Cheraw, S. C.

The subject which I have chosen deals with phases of medicine that confront every practitioner every day for the crises of disease are practically all dominated by the strength or weakness of the circulation. By the response of the heart and its branches, the blood vessels, the sick stand or fall. Simple as this statement is, the problems involved are far from simple.

When we say that a pneumonia patient died because his heart gave out, it seems threadbare, but when we come to analyze what has actually happened we find ourselves at once in a maze difficult to thread.

Let me use pneumonia to illustrate my subject. I might with equal propriety choose influenza or septicemia. A patient with acute lobar pneumonia presents the signs and symptoms of a severe toxemia—his temperature is high, the pulse rapid, the heart sounds, especially the second pulmonic, feeble, the blood pressure has fallen from 120 to 100 systolic, and the diastolic pressure is low. The hitherto healthy lung shows a number of moist rales, the skin is a little leaky, the abdomen distended with gas, and the diaphragm pushed up. The sleepless patient is beginning to be delirious. Everything points to a grave situation; we realize that the patient may succumb before a favorable crisis has had a chance to occur. Death, if it ensues, is attributed to failure of the circulation. What has happened? The poison of the disease, the pneumotoxin, and as I believe, the metabolic poisons derived from the cellular exudate in the diseased lung, have caused a degenerative change in the heart muscle and in the muscle tissue of the blood vessels, probably also in the vasomotor mechanism, central and peripheral; likewise in the capillary circulation in all organs and tissues. Other factors, obscure and subtle, may contribute to the process—changes in the endocrine glands to which in acute diseases little attention has so far been given.

The result of the combined action of these various factors is a weakening of the heart's action, a fall in blood pressure, and generalized pulmonary edema. What we call heart failure in acute disease is ,therefore, a widespread complex process about which we have very much to learn.

Whether the condition proves fatal or not depends to some extent upon what we do—before and during the danger period—to a larger extent upon the forces of resistance, innate and newborn, in the patient.

Treatment—I shall divide this phase of the subject into two parts: (A) prophylactic, (B) curative.

(A) Prophylactic—Keeping in mind what may happen, we must do everything in our power to spare the patient both physical and psychic disturbance, make the environment quiet, keep away visitors, move the patient as little as possible, making examinations only when essential, and then quickly; secure abundant sleep by means of opiates, and give a proper diet—milk or butter milk, cereals, broth, orange juice, egg albumen, water in abundance, at least sufficient to secure an output of from 1500 to 1800 C C of urine. The bowels are kept open with a gentle laxative—milk of magnesia, cascara, or by means of an enema. If the pulse is over 100 use small doses of digitalis, 10 or 15 drops every six hours. Formerly I employed digitalis routinely in all cases of pneumonia regardless of the pulse rate. However, I have come to the conviction that when the pulse is slow—in the neighborhood of 90—digitalis is not indicated; but when the pulse is 100 or higher then it ought to be used.

(B) Curative—The conditions that chiefly confront us during the critical period of the disease are: (1) vasomotor paralysis, (2) weakness of the heart's action, (3) pulmonary edema, possibly consequential to the other

*Read before the South Carolina Medical Association, Florence, S. C., May 7, 1930.

two. The first, that is, vasomotar paralysis, is best controlled by the use of pituitrin hypodermically—from ½ to 1 ampule of surgical pituitrin every six hours. For the second, one or more of the well-known cardiac stimulants may be used; caffein-sodium benzoate, whiskey, digitalis. And for the third atropine sulphate in large doses. If the patient is very cyanotic venesection may prove of value.

It is probable that glucose acts as muscle food, and hence it is advisable to administer it freely in cases of acute myocardial weakness. It may be given in the form of a 5 or 10 per cent solution by bowel or intravenously.

Should the patient be very restless or sleepless, a small dose of morphine is the best remedy. It acts under such conditions not only as a sedative, but as a veritable cardiac stimulant.

Chronic Failure of Circulation

Chronic cardiac disease, when it begins to manifest itself, gives rise to a great variety of symptoms among which the respiratory and gastointestinal are the most conspicuous.

When we try to analyze the clinical picture we find it difficult to determine to what partitional extent the heart muscle, the valvular defect, and the vessels contribute to the totality of the picture. Certain it is that a valvular defect can exist for many years without signs or symptoms of cardiac impairment. Eventually, through increasing inadequacy of the intra-cardiac circulation, the hypertrophied muscle begins to weaken and then conditions are ripe for the development of symptoms. Some have carried the thought of the part played by the heart muscle too far and have made light of murmurs, especially of that of mitral insufficiency; and yet the valvular lesion if old must be looked upon as the starting point of subsequent, even if long-delayed, myocardial inadequacy. It is, however, true that the selfsame decompensatory process can occur in hearts without valvular defect. Here the cause must be a muscle degeneration or fibrosis. This particular type—we might call it the non-valvular type of myocardial disease—is related to hypertension or to disease of the intrinsic vessels through which the nutrition or proper metabolism of the heart muscle suffers. It seems to me that cardiac adequacy and cardiac inadequacy are matters of function, and anatomic structure, as far as our present methods of study go, is not a reliable index of functional capacity. We need much additional light on this subject. It may come, from biochemistry and from a better knowledge concerning capillary circulation and the permeability of the endothelial cells. The pathogenesis of chronic myocardial failure is by no means well understood. Syphilis may play a part, but it is not nearly so important as some would have us believe.

Heredity—the inheritance of less resistant tissues is a very important factor often revealed if a careful family history is taken. Mental and physical strain, focal infections in various distant parts, particularly in the gall-bladder, disease of the thyroid gland (toxic goiter) are additional etiologic factors. Acute diseases, such as influenza, repeated attacks of pneumonia, may by producing degenerative processes lay the groundwork of chronic myocardial failure appearing years afterward. I have a particular thought in mind in reference to acute diseases as a possible factor in the development of chronic myocardial weakness, namely, that we must give more attention to our patients during convalescence from acute diseases. It is my firm belief that if we would watch the circulation more carefully in patients recovering from acute infections, even as trivial a one as tonsillitis, and also from operations, we should not infrequently find reasons for stepping in to act as guardians of the future. We should find a marked rise in the pulse rate on slight effort, a persistently low blood pressure, a little shortness of breath, a sense of fatigue on exertion—all indicating a slightly damaged circulation. If neglected nothing may happen for years, then under a strain or in some acute disease of little moment or after an operation the patient begins to show the familiar signs and symptoms of failing circulation. Perhaps then the real cause, dating back many years, is all but forgotten.

When there is dropsy the diagnosis is easy, but the diagnosis ought to be made, for the good of the patient, before dropsy occurs. If there is a valvular murmur even a brief

examination will fix attention upon the heart, but in the absence of a murmur, if there is no dropsy, many will not realize that the heart is the chief factor in the beginning drama.

What are the more obscure manifestations of circulatory failure in the presence of which diagnostic errors are possible? There are many. I shall mention only the most important.

Symptoms. —Cough—Spasmodic or continuous cough, severe or mild in nature, may be the chief if not the only symptom of a weakening heart. It is instructive to see how useless the ordinary cough medicines are in such cases. Opiates help, but they do not cure. Only rest and digitalis will do that.

Gastro-intestinal symptoms. —These are pain, gaseous distention, flatulence, loss of appetite, at times pronounced nausea and even vomiting, but often merely a sense of pressure in the lower chest or epigastrium. The feeling of gaseous distention or of pressure may come only on effort, and as it is quickly relieved by the eructation of gas, the patient is quite convinced that the fault lies in his stomach.

The doctor who fails to penetrate beneath the surface of things often will share that conviction. Patients have died suddenly who have never had anything more to complain of than a sense of oppression in the lower chest and epigastrium. In the newspapers such cases are often attributed to "Acute indigestion"—a diagnosis based on error.

Shortness of breath. —This is usually an early manifestation, but is not of necessity present. The others I have mentioned may overshadow it. The diagnosis of the real cause is also difficult, for dyspnea is associated in every physician's mind either with some disease of the lungs or with disease of the heart. While we may correctly attribute the shortness of breath to the heart, it frequently happens that we overlook the most important factor in the dyspneas, viz: a hydrothorax. It is remarkable how frequently an unsuspected pleural effusion can be found. No skill is required to discover this apart from a thorough routine examination and the ever-present thought that persistent shortness of breath is likely to be dependent on some additional factor.

Ascites—unaccompanied by such symptoms as general anasarca, fever, pain, etc; is a difficult nut for the diagnostician to crack. It may be due to tuberculous peritonitis, to abdominal or pelvic carcinoma, to cirrhosis of the liver, and these will be the first thoughts entertained. Few men, unless they have had experience with this condition will think of the heart as the cause of such an ascites. Nevertheless, that s an ever-present possibility. As regards the cardiac lesion underlying the ascities, it may be an adherent pericardium or it may be nothing more than a dilatation of the heart and myocardial relaxation. A satisfactory explanation is wholly wanting why the later condition in rare circumstances produces an ascites instead of a general dropsy.

Enlargement of the liver—This in cardiac decompensation commonly affects the right lobe or both lobes, so that the organ projects for a greater or lesser distance below the right costal arch and enters the epigastric triangle. There are, then, no great diagnostic difficulties. Sometimes, however, the left lobe bears the chief brunt of the process of passive congestion forming a conspicuous swelling in the epigastrium. This peculiar enlargement, more present perhaps in mitral stenosis than in other cardiac lesions, is easily interpreted as a new growth of the stomach or liver. If vomiting and anorexia are present, this belief will naturally be strengthened. A careful analysis of the history and painstaking physical examination are the only ways in which errors can be avoided.

Acute Recurrent Pulmonary Edema—This symptom is perhaps most common in cases of hypertension, especially in those of nephritic origin, but it is also seen in myocardial disease with or without valvular lesions and with or without increase in blood pressure. The pathogenesis of this condition is obscure. When hypertension exists we feel that there is an adequate explanation, although we really do not quite understand what happens, but in the absence of hypertension and in the absence of valvular lesion the fact that the sudden pulmonary edema is really of cardiac origin may be suspected.

Psychoses—The last symptom I should like to mention. It may happen during the course

of decompensation that a patient develops a mania-like psychosis or a delusion or a fear of poisoning. The phases are manifold and perplexing, and often suggest a primary insanity. However, they are really secondary, and are due to disturbance of the cerebral circulation or, in rare instances, to a toxic effect of digitalis.

Diagnosis: In considering these signs by which myocardial weakness may be discovered, one of the best means is to determine the cardiac outline. This can be readily accomplished by locating the heart beat through inspection and palpation and by outlining the boundaries of the heart by light percussion. These methods are more important in many cases than auscultation, not that auscultation is a negligible procedure—far from it—but it may mislead while inspection, palpation, and percussion rarely do so. In saying auscultation may mislead, I mean myocardial failure may exist with perfect rhythm and with what are to all intents and purposes normal heart sounds. Nevertheless, in such changes the other methods of physical diagnosis will show changes, as previously stated in this paper, a systolic murmur at the mitral area or at the aortic area may be revealed on auscultation. These are more or less accidental and are not due to endocardial changes. Auscultation may also show arhythmias: these, however, are often of little diagnostic value as regards the nature of the case, and certainly not as regards its gravity. For example one may find auricular fibrillation in a heart with entire functional capacity. Much may be said, however, upon the subject of arhythmia in connection with myocardial disease, but this would carry me too far afield. A gallop rhythm of a certain type should, however, be mentioned and on account of its diagnostic and prognostic importance. It is the one in which the first sound is reduplicated, the so called "bruit de galop." In the absence of a febrile process it indicates serious cardiac damage. I have found it most frequently in the type of myocardial failure which is progressive and often but not always associated with true nephritis.

Treatment. The treatment of chronic failure of the circulation is a simple matter as a rule, if the true conditions are recognized —rest in bed, mental rest, light meals, open bowels, and digitalis sum up all of the treatment in the ordinary case. One should bear in mind the frequency of undiscovered pleural effusion. When found, the effusion is removed by tapping. If there is reason to think it has been of long standing, the tapping should be done very slowly so as to guard against the danger of acute pulmonary edema. If there is much dropsy, salt restriction is indicated. In the more advanced cases, when there is general dropsy with cyanosis and shortness of breath, digitalis is the mainstay of treatment. Diuretics are of value; among the best are theocin and theobromine.

For restlessness and insomnia nothing equals a small dose of morphine which, just as in acute cases, acts here too as a cardiac stimulant by its sedative and sleep-producing effects. In cases with chronic cyanosis and distention of the veins, venesection is helpful. In cases with cyanosis so profound as to raise a suspicion of mediastinal tumor or coal tar poisoning, free bleeding from the arm is unequaled as a remedial agent.

DISCUSSION

Dr. W. R. Mead, Florence:

Dr. Coney has advisedly divided his paper so that the acute or toxic forms of myocardial failure receive separate attention from the chronic or degenerative varieties. In this connection I should like to mention that a recent communication from Dr. E. F. DuBois, in charge of one of the large medical services in Bellevue Hospital in New York, reports that during the past two or three years careful statistics have been compiled on all pneumonia cases entering Bellevue Hospital. He was astounded, as was I, to learn that the death rate is distinctly higher in those cases receiving prophylactic treatment of digitalis than in those who receive none of the drug. This confirms a feeling which I have long entertained that digitalis has little or no beneficial effect on the circulation embarrassed by toxic myocarditis. At least one exception, however, should be made, to cover those cases of acute thyrotoxicosis where a combination of digitalis and quinidin is often most efficacious.

For the chronic cases digitalis remains the sheet anchor in treatment, closely followed in importance and often preceded by morphia. Although for several years I had remained unconvinced of the usefulness of any of the extra-oral forms of digitalis, I must admit that recent experience has made me change my mind. The intravenous use of large doses of an effective digitalis preparation, such as Digifoline, is often attended by dramatic restorations of normal cardiac rhythm. I feel that dosage of less than 5 c. c. of

Digifoline are of little value and that the drug must be administered intravenously rather than subcutaneously if any effect is to be secured.

One method of treatment of pulmonary edema which accompanies acute hypertensive crises in essential hypertension and nephritis is by old-fashioned cupping of the chest. While this is a procedure handed down from the old school and has been largely forgotten by the present generation of doctors, it certainly has proved to be a most useful adjunct in the treatment of these drowning individuals, especially when used in conjunction with phlebotomy and morphia.

Dr. T. R. Littlejohn, Sumter:

I think myocardial failure is a better term to use than myocarditis, because very often the term "myocarditis" is misleading. Christian has pointed out and emphasized that we may have a heart with a chronic myocarditis and that the heart itself may not be enlarged. In cutting into the heart, the interstitial tissues and the muscles of the heart may be normal. So it may be normal from a microscopical study. We all know that many of these cases, as Dr. Coney pointed out, are diagnosed as mitral insufficiency. But mitral insufficiency, in a person under forty years old, is a very rare occurrence. These patients may have a murmur there, may have a mitral murmur, but that is caused by a dilatation of the muscle itself. I think it was Austin Flint who said, forty years ago, "Lucky is the man with a heart lesion who has a physician that never uses a stethoscope."

Harrison, of Vanderbilt University, examined the muscles in patients who had edema. He took the heart muscles and the skeletal muscles and dried them out and found an alkali deficiency. He thought it was from edema. Then he took the muscles of patients who died of myocardial failure without edema, and he found the same deficiency. I should like to know what Dr. Coney thinks of this alkali deficiency in patients dying of myocardial failure.

Dr. Coney, closing the discussion:

I just want to thank these gentlemen for the discussion of the paper and to say to Dr. Littlejohn that I think the subject he mentioned is very interesting, but it is getting so late now I would not like to enter into it now.

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*PROPER CARE OF FOOD

By Martin Woodward, M. D., County Health Officer, Lexington County Health Department, Lexington, S. C.

Never truer is the saying 'cleanliness is next to Godliness,' than when applied to food. In our endeavor to provide clean food—from a medical standpoint—we are constantly faced with an ever changing set of standards that can be kept in mind only by those who daily keep abreast of current investigation. Many doctors have thus come to accept routinely and teach their patients that pasteurized milk is the only safe substitute for human milk. However, there are far too many who do not feel in this manner and so inform their patients. I speak only of doctors since I believe that by far the greater part of the privilege and duty of promoting the well-being of people is on them. The various other agencies should be, and in most cases are, either directly or indirectly under medical direction.

First, I shall discuss raw foods. Naturally, milk comes in as the first item. For several years milk has been pasteurized in some of the larger centers, but, as I have said before, it was not considered necessary in the vast majority of cities and towns.

The United States Public Health Service now has an ordinance called the Standard Milk Ordinance that was first gotten up in Alabama—which state by the way ranks as second in the union in its Public Health accomplishments and endeavor—and later presented to the United States Public Health Service. This ordinance was gotten up in the effort to cut down the tremendously high infant mortality rate. Its sections deal with cleanly and sanitary methods of handling milk. Without having figures available I cannot say definitely how much this has accomplished its purpose but observers in the thirteen cities of South Carolina, where it is now in operation, say that it has certainly cut down the death rate of babies. In passing I will say that no item in the proper method of handling of milk itself or the control of milkmen, machinery or flies and manure disposal is left out. While not perfect it is, when intelligently enforced, a powerful factor in aiding not only pediatricians but general practitioners as well in their efforts to help bring babies through to adulthood. Another feature of this ordinance is that its requirements can be met by any dairyman who sincerely desires to produce clean milk containing the smallest numbers of bacteria. Those dairymen who cannot produce milk meeting such a standard are a menace to any community all of the time; consequently it

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*Read before the Ridge Medical Society, Batesburg, S. C., June 16, 1930.

aids in "warding out" the undesirable producers.

Little need be said of city water supplies, since samples of water are taken about four times a year at least by the State Chemist. Besides, water plants are inspected regularly in most places to see that all requirements are being met. In the country where open wells abound the location of the well a safe distance, at least 300 feet from surface toilets, barns or chicken houses is obviously necessary. Open wells should be covered always. That portion of ground immediately adjacent to the well should be covered with cement for at least two feet and have a downward slope from the walls of the well outward. In the present day trend of electrification of farms, the open well is rapidly disappearing and should be since it is a constant source of danger from infectious organisms. Bored wells, where water comes from at least 100 feet below the ground surface, provide much safer water than open wells.

I feel that in view of present knowledge, the presence of the ordinary open back surface toilets that breed flies by the peck and of course enable the flies to carry typhoid and other bacilli, is inexcusable. If no running water is available sanitary pit type toilets with complete closure below the seat, which has covers, is the only substitute. Again, however, many homes are installing bath rooms. In the latter case the chief concern should be to pipe liquids and solids far enough away from the house to prevent flies coming from the exit back to the house.

Open toilets and barnyards are the two worst offenders in furnishing bases from which flies operate. They breed in stable manure and bring disease from toilets.

When on display all raw foods should be covered with wire screening or cheesecloth or similar material that will not permit flies to get through to the food. Such foods should be so placed as to prevent dogs getting near enough to urinate on them. In one town I heard of a number of vigorous protests—rightfully so—on account of this one thing. Raw foods should not be kept on sale over twenty-four hours, since some contamination will very likely occur after that time. Fruit bought in the open market should be washed or peeled before eating. It should be washed since many people eat fruit with the peel on.

An item covered in the milk ordinance previously referred to requires wassermann blood tests on all persons handling the milk in any capacity. This is frequently ignored in the case of storekeepers and clerks who can just as easily infect innocent persons if harboring some infectious or contagious disease. It seems to me that this matter should be given serious consideration if we are to prevent food handlers from disseminating disease in every direction. An ordinance covering the care of the health of food handlers should be framed in such a manner as to care for all up to date needs and be enacted in every city. This should apply not only to city clerks but those coming in from the country since in many cities and towns there are public markets, used by country people. By all means whenever a food handler or one of his family contracts an infectious of contagious disease, such a one should promptly report it to the proper authorities and refrain from handling food until his physician deems it safe for him to resume work. Full cooperation of physicians with other physicians and the health authorities will be of great help in this phase of the care of foods. Along this line I want to urge all physicians to report promptly and regularly all cases of communicable disease that come under their supervision. Such reports will enable local and county Boards of Health to cooperate more efficiently with each other in their effort to prevent the transmission of disease in and on foods of different kinds.

Since the title of this paper covers a rather large scope, much, of necessity, has been left out. The United States Public Health Service has compiled a number of form ordinances covering all phases of the care and control of food. Copies of these may be obtained by anyone interested from the United States Public Health Service at Washington, the State or County Board of Health.

In our efforts then to provide clean food that is handled in a sanitary manner, we should, first, study the needs of the particular locality in which we intend to work; second, see that all food handlers however

unimportant their role, have a "clean bill of Health" from their physician or Board of Health; third, all food should be so handled that it will reach the consumer as clean and sanitary as is possible; fourth, only by intelligent and sufficient legislation can those charged with enforcing as well as those obeying the law know what is expected of them; and fifth, full cooperaton on the part of all concerned is absolutely necessary if the object desired, viz: clean sanitary food—is to be attained.

Let me remind you again that this paper contains only a few suggestions and is intended to stimulate each one present to use it as a basis for enlargement and further thought in reaching a solution of the problem in his own locality.

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*RENE THEOPHILE HYACINTHE LAENNEC

Clay W. Evatt, Greenville, S. C.

Throughout history it is noteworthy that at certain periods more great men are produced than at other times. Turbulent times beget great men. Following the destruction of war it is not the heroes of the battlefield who build greater and better Nations—these heroes have served their purpose, are warworn and soon begin to live in deeds of the past; serving further however by letting their mantle fall on the boys and young men of the time. It is this succeeding generation who seeing the terror and the futility of war yet are not sapped by it; aroused to higher ideals, greater dreams and broader visions; it is these men, young and strong who build the new superstructures of industry, commerce and science.

From 1781 to 1826 European History was fraught with consequence. Luther with his religious reformation and later Napoleon and his political upheaval had all Europe in a state of uncertainty and wonderment, mentally and physically. In the midst of this chaos February 17th, 1781, Laennec the hero of this sketch, was born. Medical men win encounters less celebrated but far more noble than Waterloo. Laennec attacked a foe more subtle and more deadly than that opposed by Napoleon.

Laymen and most doctors do not know enough about the heroes of Medicine. Laennec the greatest of all physicians, the father of Physical Diagnosis, was he who systematized, catalogued and interpreted signs and symptoms, and he who understood the underlying morbid anatomy more clearly than any man before his day, and as clearly as any since. He was born in the little town of Quimper in Brittany in the northeast corner of France near Brest. Laennec's paternal grandfather was in 1764 Mayor of Quimper. He was possessed of culture and won some distinction as a writer and orator. The maternal side of the house was also of consequence in Quimper, boasting in its ancestors a minor poet, also Hyacinthe Morice, historian of Brittany. Laennec's father was Theophile Marie, a lawyer and a writer, but did not excel in either field. Michelle Guesdon, Laennec's mother, was of feeble constitution and died soon after the birth of her fourth child, when Laennec was six years old. Genealogists used to tell us that distinguished children are more likely born of elder parents, also that intermarriage of kinsmen is of evil consequence, further that the first child is more likely to become distinguished than any of the other children. Laennec substantiates the last but not the first two of these sayings. Laennec's father and mother were cousins, this being true they had to have a special dispensation in order to get married. At the time of their marriage Laennec's father was 33, the mother 26.

At the death of his mother Laennec and his brother Michaud went to live for one year with their paternal uncle, the Rector of a parish in Elliant. At the end of this year the boys went to live with their Uncle Guilliaume in Nantes. Uncle Guilliaume, who was a doctor graduated at Montpellier and studied later under Hunter in England, at the age of 40 became rector of the University of Nantes. Laennec and this uncle were very fond of each other, and of the many illustrious men who influenced his life, none were of more importance than this uncle, who was in reality a father and with whom the boy was constant-

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*Read before the Medical Study Club, Greenville, S. C., June 12, 1930.

ly associated during the formative years. His years at school were full of honors, however, this studious keen-witted boy did not put all of his time on studying. He made rounds with his uncle and thoroughly enjoyed games and outdoor life in Nantes. His holidays were spent in the country with an aunt, here he and his brother boated, fished and rode a gentle jackass. Besides his chief enjoyment, physical exercise, every phase of Natural History interested him. This was also true of many of the greater spirits of Medicine, among them Jenner, Kock and Lister. J. J. Audubon was a boy of eight living in Nantes during the Terror, and it is possible that these two boys were friends since they both collected eggs and stones and did other nature studies along the Loire. At this time the Revolution was in process. During the Reign of Terror three thousand perished at Nantes; the Guillotine was too slow, naked men and women were tied together and thrown into the Loire; this also was too slow; artillery mowed them down; and Typhus doomed many who escaped the other forms of destruction-while still others perished of hunger. Before he was fifteen, Laennec had seen fifty heads fall into the basket under the Guillotine outside his own home. His own uncle Guilliaume was in prison six weeks under suspicion. During this period Laennec served his apprenticeship by making lint bandages and dressings while his uncle was treating the wounded and Typhus (the Uncle was Chief of Staff at the Hotel Dieu.) The boys' college was turned into a hospital. He entered another school, the National Institute where one hundred and twenty boys continued in attendance through war and Typhus. He won a prize in Latin, his brother Michaud won all the other prizes.

At fourteen and a half, with some castoff clothes and his uncle's promise of support, which were of good to him, and his father's promise of money, which was of no good, he began the study of Medicine in Nantes under distinguished teachers. Along with Medicine he continued his studies in Natural History, Latin, Greek, Music and Dancing. He so perfected himself in Latin that he spoke it with ease and regretted that it was not the universal Medical language. For lack of money to go to Paris, Laennec for the fifth time repeated the course at Nantes.

In 1801 after a season of bad health and a continuation of worse finances, he got together enough clothes and money to begin the study of Medicine in Paris where he entered the Clinic of Corvisart at the Charite. Corvisart was the founder of French Clinical Medicine, he especially stressed bedside instruction and thorough autopsy work. Incidentally we recall that Corvisart was physician to Napoleon. Bayle, seven years older than Leannec was Corvisart's assistant. Bayle and Laennec were greatly attracted to each other. Both won fame in Tuberculosis and both died of the disease.

Laennec collected the aphorisms of Corvisart and later published them in thirty-five articles. He took a special course under Dupuytren, who was three years his senior. For his assiduity, genius and thoroughness he was soon selected by his teachers for the Society of Medical Instruction, the elite society of the students. He separated Peritonitis from Enteritis and described every type of Peritonitis known today. At twenty-one this treatise won for the student immediate fame. In 1803 he described accurately and indicated the use of the subdeltoid bursa, and showed that Glisson's capsule is not muscular. The first prize in surgery was divided with another man; the first prize in medicine he won. He continued to win so many honors that finally only one other student was bold enough to compete in further contests, so Laennec was asked to withdraw. Troubled with Asthma ever since he went to Paris, barely enough food and clothes to keep body and soul together, the periodic repetition of the n'er-do-well father imploring his son to get him employment in Paris, were sources of never ending handicap and embarrassment to his illustrious son; despite all this he graduated already a man of renown. His graduation thesis was in Latin, "Propositions on the Doctrine of Hippocrates in Regard to the Practice of Medicine," He proposed the return of the classification of fevers from the seven classes then in use to the Hippocratic classification of intermittent and continued fevers.

In 1805 he had his first holiday since coming

to Paris. He went to Soissons where he hunted quail and hares and perfected himself on the flute. He was five feet three and handsomely proportioned at this time. He wrote several poems and was credited on one occasion with writing words for music. During this vacation he met a young widow two years his senior, who later became his wife. In September he returned to Paris relieved of his Asthma, and began private practice with renewed energy. His first year he collected 150 Francs. He was a frequent contributor to the Journal de Medecine, dissected and described acephalocysts—he wrote the first accurate description of melanotic tumors. In 1803-5 Bayle and Laennec noted tubercles in all the organs of the body and Laennec pointed out the possibility of cure. In March 1804 he set forth that phthisis had been confounded with twenty other diseases but that it was only tuberculosis of the lungs; from which time the term Pulmonary Tuberculosis replaced phthisis. His idea was that a special toxic malignancy was the nature of the disease.

He was an assiduous practitioner and so his practice grew; he thought first and always of his patients. The fee was the last thing considered; it is said that he was up and down with one patient for forty nights; he was more anxious to give relief than to make a diagnosis. By 1811 he had a distinguished clientele and was collecting 8,000 Francs. He held office hours in the morning and in the afternoon made calls all over Paris. From time to time he sent money to his shiftless father. His Asthma returned and with it came Angina Pectoris. In 1816 he took a twenty-bed appointment at the hospital Necker. One day while walking in the park he saw a bunch of urchins playing; they were divided into two groups, one group at one end of a log tapping with a stick, while the other group listened with their ears against the other end of the log. Immediately Laennec saw and understood their game. Thus came into being the idea of the stethoscope. At that time Laennec had a very fat and filthy girl patient whose chest he was unable to satisfactorily auscultate. Hastening back to the hospital he rolled up a paper backed book into a tight cylinder, placing one end of the cylinder to the patient's chest and his ear to the other end he heard pectoriloquy. Using this principle he determined to perfect an instrument which would facilitate auscultation. Laennec learned to use the lathe and made solid battons about one foot long with a central canal. He tried many woods heavy and light and found that the light woods were best, for example the beech or linden. He finally made a stethoscope of three pieces screwed together, and with this instrument he could hear the rale. The word auscultation is from auscultare to distinguish the Hippocratic method of examination and mediate to indicate the use of the stethoscope. Cylinder, Batton, Solometer, Pectoriloquy, Cornet Medicale, Thoraciscope were all suggested as names for the new instrument. Laennec coined the word Stethoscope; Stethos means chest, Skopeo means, I examine. At the time he invented the Stethoscope he had 28 patients with cavities. He diagnosed these with the Stethoscope and verified the diagnosis at autopsy. At that time one-third of all the patients in Paris had Tuberculosis so the opportunity for chest work was ample. He sold 3,500 copies of his book De l'Auscultation Mediate, the two volumes for 13 Francs. Along with the book he sold his Stethoscope for 3 Francs.

This book, De l'Auscultation Mediate, stands today unparalleled, a monument to hi genius, a masterpiece both in the elegant, unassuming c'earcut style of literature and as to the truths which it so beautifu ly portrays. In the book he separates and describes diseases of the chest. In comparison to a book published last year by an authority, except for Roentgenographic and Laboratory findings, Laennec's is far and away the more instructi e and the more enjoyable of the wo books. When Osler's pupils asked him for a description o pneumonia he referred them to the pneumonia chapter in Laennec's book.

For Tuberculosis he tried many specifics ven as we today are still looking for a magic wand. He thought seaweed might be specific and tried infusions of i with a lot of se weed placed about the bed of the patient. He antedated Trudeau in advocating fresh air in the treatment of this disease. He went to Bordeaux to treat a wealthy Spaniard who was to pay him 10,000 Francs for his ex-

amination and 50,000 Francs if a cure was effected. Laenne examined the patient and found no pectoriloquy. During the night the cavities drained and the next morning pectoriloquy and cracked pot sounds were present. He was physician to the Duchess of Berry which brought him 4,000 Francs annually.

When the Stethoscop was first invented capable men were indifferent, and incapable ones ridiculed the inventor. Our own Oliver Wendell Holmes wrote a satirical poem about the "Listening Tube." But after a while even his arch enemies took up the Stethoscope.

Our hero, failing in body, subject to remittent attacks of Angina Pectoris, continued Asthma, and by now far advanced Tuberculosis, returned to his country estate Kerlouarnec at Ploare, broken in health. Here he spent his last days being wheeled about under the trees enjoying the companionship of his loving wife and many friends. Growing continually weaker he died at the age of 45, August 13th, 1926. As Corvisart said of Bichait is more true of Laennec, that no one accomplished more in so short a time nor did it so well. In Quimper is a monument erected by the Physicians of France to this great disciple of Aesculapius. If you should carve the name of Laennec on a marble shaft reaching to the azure of the sky, this will have crumbled in decay when he and his contribution will be still growing and glowing in the memory of millions yet unborn.

CYANOSIS IN INFANTS*

By William Weston, Jr., M.D., Columbia, S. C.

Choosing a subject that is of interest to all of you is nigh impossible but one that will attract your attention is what has been attempted. That is cyanosis in infants. The chief reason this topic was taken is that something should be done to improve the infant mortality of this state (South Carolina). Understanding the various causes of cyanosis in infants is a beginning to relieve the high infant mortality figures that stare us in the face, for the cure soon follows the known causative factor.

Allow me to present some numbers compiled at the bureau of vital statistics of this state (S. C.) Infant mortality in South Carolina:

1927—3,968.
1928—4,150.
1929, first 4 months—1,142.

Deaths increase in infants in May through September.

Births in South Carolina:

1928—44,000 (not this many reported).

This gives us over 100 deaths per thousand or more than 10%. The doctors do not report their births which runs our mortality rate higher. Does it sound very complimentary to our profession to know that it is most fortunate for the report of deaths to be in hands of embalmers and undertakers because we are incapable and neglectful of our duties. No sooner are we included in the United States Bureau of vital statistics of birth rates than we are excluded simply due to the shirking of this responsibility.

Cyanosis means a bluish discoloration of skin and mucus membrane. It indicates a disturbance in the oxygen carbon dioxide balance in the circulation. Infants dying at birth or shortly thereafter manifest this sign. Realizing the disturbing factors we can frequently prevent a lethal excitus.

Max Schan in Abt's Pediatrics gives an excellent differention of cyanosis.

1. Asphyxia cyanotica is usually due to breech presentation or hemorrhage from forceps delivery and appears immediately after birth. No murmur is heard in this condition.

2. Winkle's Disease. Bahl's Disease.—Marked changes in the blood of the new born occurs in these diseases, and often with associated cardiac murmurs which render the differential diagnosis from heart lesion difficult. However, the cyanosis is not a true cyanosis, the skin being a bronze color. The urine contains a metahemoglobin and red blood corpuscles. The temperature is raised. In Bahl's disease also hemorrhages into the skin and viscera occur, and the cyanosis is mixed with jaundice.

3. Atelectasis. In congenital atelectasis the cyanosis is usually intermittent, being more prominent about the face and extremities.

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Dyspnea is an associated sign. The heart sounds are feeble, murmurs are present.

4. Hypertrophy of the thymus.—Cyanosis and dyspnea occur only paroxysmally and in the last stages of the condition. No murmurs are heard.

5. Asthma. The paroxysmal attacks in asthma are accompanied by intermittent cyanosis of varying intensity. The nature of the attacks, the wheezing and prolonged expiration and the absence of heart murmurs make the differential diagnosis from congenital heart easy.

6. Emphyzema. Cyanosis in emphyzema is paroxysmal. It is more a muttering than a true cyanosis. The absence of heart murmurs and the history of primary pulmonary involvement speak against the diagnosis of congenital heart lesions.

7. In broncho-pneumonia, cyanosis and dyspnoea may be present. A primary infection, physical signs in the lungs and a normal heart differentiate it from congenital heart lesions.

8. In spasmodic croup and (9) laryngeal diphtheria the history of an acute onset, slight fever, dysphonia or aphonia, dyspnoea, most marked during inspiration, a barking cough and a normal heart aid in a correct diagnosis.

10. Retropharyngeal Abscess. The diagnosis is based on the definite history of an acute infection with one-sided swelling of the neck, progressive dyspnoea and absence of heart murmurs. Cyanosis occurs only in the later stages.

11. Cretinism.—A peculiar lividity and even cyanosis of the skin, especially of the extremities, is sometimes present. However, the characteristic facies, stature, characteristic skin and hair, and the absence of heart murmurs are diagnostic of cretinism.

12. Acidosis.—In acidosis the dyspnoea is superficial, very hurried. Cyanosis may be present in the later stages. Heart murmurs are absent.

13. Acquired Heart Disease. _____ In acquired heart lesions the left side of the heart is first involved and in congenital lesions the right side.

This concludes his differentiation but only recently I have seen a condition not included, mistaken for a congenital heart lesion. Congenital anomalies such as a diaphragmatic hernia may cause intense cyanosis which appears periodically. A repeated examination of chest may be necessary and barium feeding with a G. I. X-ray series will clinch the diagnosis. Another diagnosis that was incorrectly made was spasmophilia in a congenital heart lesion. These are not as easy to differentiate as it is to write them.

In congenital heart lesions, there is little to do except prevent any infection, keep warm, and rest so as to conserve the heart muscle. The prognosis in congenital heart lesions is not good. The more severe the cyanosis the graver the case. Once I saw a professional boxer who had a congenital heart lesion, who experienced perfect compatibility.

There are three pathological disturbances causing cyanosis which I intend to discuss more fully, namely: asphyxia neonatorum, atelectasis and enlarged thymus. The diagnosis of one of these conditions is met with frequently and I am certain the first two are not recognized sufficiently early.

Asphyxia neonatorum, meaning apparent death, is something the pediatrician sees infrequently, while the general practitioner and the obstetrician meet it too often. There are two types, the congenital and the acquired. The latter is so closely allied with atelectasis that I am discussing them the one and the same.

There is an intra-uterine interference with the oxygen-carbon-dioxide balance in the circulation that continues after delivery. The common belief is that there is an attempt for baby to breathe in the uterus which causes the blockage of air passages with mucus and amniotic fluid. The other displays it difficulty by a slowered heart action which soon becomes rapid and irregular and the babe is apt to have convulsions. Labor should be terminated immediately. Any factors that interrupt the normal intra-uterine circulation, such as placenta previa, tetanus uteri or twisting of the umbilical cord may bring about this condition.

It is the idea of a great many in medicine that infantile palsies are caused from faulty obstetrics while most of these cases are brought about through this condition, that is, asphyxia neonatorum. Cerebral hemorrhage is not un-

usual, and I think this point should be made clear to the student of medicine regardless of his specialty.

There are various degrees of cyanosis in asphyxia neonatorum, but regardless of the stage, the object is to reestablish the oxygen-carbon-dioxide balance; to allow the fluid in the respiratory apparatus to drain out by holding baby by heels. The introduction of oxygen CO_2 by tube in 2/3 to 1/3 proportion will save a great many of these babies. This is why inflating our mouths and blowing this into infants' mouths with the head correctly tilted is such an aid.

The second disease, atelectasis, is seen frequently. There are two types (1) congenital, (2) acquired. Congenital atelectasis is the failure of expansion of the lung or any part of this organ at birth. There exists a partial atelectasis in practically all infants for the first twenty-four hours. The posterior lower lobes and those areas next to the hilum are the last to expand.

The etiology is closely associated with a difficult labor, but more frequently the babe is premature or a congenitally weak infant. The proper nutrition for the mother during pregnancy will usually prevent this marasmic condition at birth. Improper function of the respiratory center is the chief apparatus at fault. Of course, there are causes as compression of lungs from tumors like enlarged thymus or neoplasms. The greatest danger in a prolonged atelectasis is that this area becomes infected resulting in a pneumonia.

There was a case under my observation where a baby, two months old had been sleeping with its sister of 3 years, who had pneumonia. It was noticed that the infant's color was blue, but there was no fever, no signs of pneumonia. However, two days later, there was fever with signs of pneumonia present.

The physical signs of chest are of little aid if one suspects this condition. A crepitation might be heard in full inspiration. The last few papers I have heard seem to "drum up trade" for the roentgenologist, but it is of the greatest aid in verifying our chest conditions in the causes of cyanosis and frequently it is the method by which our diagnosis is made.

The acquired form of atelectasis will not be discussed here, suffice to say that it follows empyema or pulmonary obstruction. In whooping cough, areas of emphysema appear, causing compression which results in atelectasis.

The newborn has practically no reserve supply of air in the lungs, therefore, the least blockage by mucus or other factors will cause atelectasis. Making the infant cry lustily and vigorously is the best method to assure yourself against atelectasis. The infant should be turned from one side to another fairly frequently, acting as a stimulant in expanding the lungs.

The thymus gland is an organ which is not well understood. Its function is debated and I believe it plays an important role in the development of the organism in utero, but a minor one after birth. It seems likely that there is some association in the lymphoid tissue and the thymus, particular is this true in the enlarged thymus. Where the thymus is hypertrophied, the chief disturbance is caused from pressure rather than the contents of the gland. Of course, one meets with status lymphaticus at any age, but the cyanosis seen in infants from the enlarged thymus is due to the weight of the organ on the vessels. The change in position of the baby will verify this belief,—if the head is allowed to droop on chest, an intense lividity is produced immediately. The cyanosis here as in the congenital heart lesion does not clear up rapidly, unless the position is altered. This evidence proves further that the greatest element present is a circulatory phenomenon. A careful physical examination will reveal the increased area of dullness over the (precordial) upper sternal region and more assuredly is this correct when the dullness extends to the left. I find in infants there is a comparative dull note over the right upper chest, anteriorly, while the corresponding left is hyperresonant. I tried to convince myself that this was accounted for in that I examined from the right-hand side; that is, the baby had a tendency to roll towards the examiner, but changing to the opposite position did not alter the note. Therefore, the conclusion was reached that the location of the heart and associated structures caused the difference in note. I find there is a change the end of the second year when the right and left areas are distinctly

more alike on percussion. When there is a dullness in left upper chest anteriorly, one's suspicion of pathology should be aroused immediately.

There are waves of excitement which outdo the enthusiasm in the medical field as well as in other vocations. It is almost an axiom that in order to succeed in your particular subject one must become a radicalist. This is not in the least true. It is a belief that the public has, because our good fellows of the medical profession have induced this idea among the people. If something good can't be said, then keep quiet. Science creeps like a baby, while art jumps like a kangaroo.

The heated discussion of thymic deaths was at its height while I was chief resident at the Children's Hospital, Philadelphia. I recall one instance very vividly in which the professor of pediatrics while examining a baby with pneumonia, turned it over and the baby died. He said, "Enlarged thymus." Postmortem examination showed a bronchopneumonia with a normal thymus. John Lovett Morse opens his paper on "The Thymus Obsession" with this sentence: "It has recently become the fashion, not only for the pediatrists but for physicians in general to attribute all the disturbances of infancy and early childhood which they cannot lay to rickets, to the thymus." It is an excellent paper and I would advise your time well worth spent in digesting it. (Boston Med. & Surg. Jour. Vol. 197, No. 33, pp. 1547-1552. Feb. 1928).

The roentgenologist has you at his mercy in the determination of an enlarged thymus as he can place the child in such a position or his tube in a site that will cast a shadow similar to that of a hypertrophied thymus.

There are three cardinal symptoms of enlargement of the thymus, (1) cyanosis, which may be remittant or continuous, (2) Attacks of suffocation (dyspnoea) and (3) laryngismus stridulus. The last symptom is seen far more frequently in tetany or spasmophilia. Of course, one of these diseases will have a synergistic action on the other. If the thymus weighs 15 grams or above, it is considered a pathological organ. The gland thickened in the anteroposterior diameter has far more significance than the lateral diameter and there we must rely on the symptoms and roentgenograms.

The surgical treatment of an enlarged thymus consisted first of lifting the organ up and tying to the tissues of the neck. Due to poor results another operation superseded which was a thymectomy, but the mortality rate was 33% so this has been discarded for the X-ray treatment which has produced excellent results in the hands of experts.

In conclusion, one type of cyanosis may need stimulation as in atelectasis, while another may require absolute quiet and rest as thymic enlargement. However, the use of oxygen or better, oxygen-carbon-dioxide is useful in every case of cyanosis.

DISCUSSION

Dr. Joseph I. Waring, Charleston: Dr. Weston has covered so thoroughly the various phases of cyanosis that there is only one point I should like to emphasize. Probably the most common type of cyanosis is the one which we see in premature infants. This is particularly important in regard to the statement he has made that cyanosis has a considerable influence on our high infant mortality rate. About one-fourth of our infant deaths under one year are ascribed to immaturity. It is my impression and I think it is a generally accepted fact that a great deal of immaturity is due to syphilis in the mother and consequently in the baby. So one way of reducing our high infant mortality would be to pay more attention to detecting and treating syphilis in parents, especially in the pregnant woman.

EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M. D., F. A. C. S., CHARLESTON, S. C.

NONINFECTIOUS FACTORS IN THE ETIOLOGY OF SINUS DISEASES

Ralph A. Fenton, M. D.

(Annals of Otology, Rhinology and Laryngology, June, 1930. Page 493.)

We have witnessed the massacre of turbinates, tonsils, teeth, and sinuses by clinicians schooled in facile technic, eager for quick results, yet ignorant of basic physiology and pathology.

Among children in the same household, with no differences in environment, diet or exposure, one will develop sinus disease, the others not. Adults in offices, college students, industrial workers, swimmers, using common facilities—countless groups of human beings exposed to equal hazards daily remain free from sinus involvement save for a few susceptible mortals in each group.

That infection is not alone or mainly to blame has recently been demonstrated. Sometimes the nasal discharge is sterile and sometimes it has one or more bacteria of feeble virulence.

Among the extrinsic factors are those of environment; climate, including heat and cold, amount of humidity in the air. House heating systems which lack proper means of humidification are especially bad influences in this regard. Irritant vapors or gases—fuels, exhausts, industrial products—may cause decided lowering of local resistance, as also excessive smoking.

Physical factors external to the sinuses include, of course, direct trauma.

Influences of a general order which definitely lower resistance in susceptible persons include prolonged exposure, especially with chilling of the body surface; physical or mental overwork; repeated loss of sleep; dieting or starvation. If these factors be complicated by glandular wastage, as in severe emotional shock, excessive venery, thyrotoxicosis, the resistance falls to a very low ebb.

Intrinsic factors are: (a) Anatomic factors, (b) allergic predispositions; and (c) occupational exposure.

Accidental introduction of water into the sinuses during swimming or diving.

Metabolic disturbances, due, mainly to vitamin A deficiency, are among the most important factors in the etiology of sinus disease.

Severe disturbances in the respiratory system may, on account of increased respiratory effects, not only cause direct infections complications in the sinuses, but also may interfere indirectly by causing turbinal hypertrophy and consequent stasis. Herein may be grouped not only a certain number of asthma cases, but also others of rhinorrhea, of periodic turgescence prior to and associated with menstrual disturbance, of sphenopalatine pain, associated with swelling at the tuberculum septi, and the like. Such troubles are often intimately linked with dysfunction of the chromaffin-adrenal system and of the so-called glands of internal ecretion; and undoubtedly many such cases are helped by appropriate though minimal dosage of the glandular substance—pituitary ovarian, thyroid, parathyroid—which ever seems to be lacking.

Endothelial permeability to leucocytes, as well as heir distribution, is regulated in large measure by automatic nerve impulses.

The reticuloendothelial system, consisting only of cells of the (a) splenic pulp and (b) lymph nodes, (c) Kupffer's stellate cells in the liver, (d) neuroglia and nerve cells, but also of (e) mesenchymal connective tissue elements in th adventitia of blood vessels, was traced by Marchand, Borel and Maximow, Ribbert and others by vital taining methods. They prepared the way for Aschoff and Kiyono's monumental study of the mesenchymal, mononuclear phagocytes of the connective tissues. Their findings have been confirmed and ex-

tended by Maximow, Jaffe, Cannon, Opie and many others.

Roughly stated, it is not accepted thlat the vascular endothelium—not only special cells in distant structures like the bone marrow or spleen—is a primary factor in supplying the so-called histiocytes, which are most important in phagocytosis, in the removal of debris, and in the formation of granulation tissue. Not only from the vessel walls and by filtration from the blood stream, but also from among the fixed cells of ordinary connective tissue, these cells originate. From the syncytium are developed the small round cells which appear to combat inflammation.

Antibody formation is thought to take place mostly in the cells of the reticuloendothelial system.

This would account for the demonstrated phagocytosis of bacteria placed on the skin and other epithelial surfaces.

Conversely, exhaustion of the mesenchymal defense reaction accounts for the "agranulocytic" inflammations with spreading necrosis and rapid death, and for fulminant influenzal complications in which no impulse toward formation of a protective barrier of leucocytes exists.

Defensive immunity is a mobilization and sensitization of all cells and tissues, most notable of the reticuloendothelial components of the connective tissues.

Sterile inflammations have been produced by irritative agents and have been found to increase resistance to the penetration of bacteria later introduced. Polymorphonuclear cells appear first and later when the tendency toward recovery is established, monoclear cells predominate.

Intravenous injection of vital stains like trypan blue, or of pigments like colloidal silver, saccharated iron and india ink, produces a so-called "blocking" of the reticuloendothelial cells. The amount of vital staining—especially notable in the spleen and liver—is an accepted index of the functional activity of these cells. Accurate study has been made of the stimulation of this "blocking" of the release of antibodies into the circulation. Small amounts of the "blocking" or irritant substance intravenously stimulate antibody liberation, while large amounts inhibit such liberation. Increased vital staining is also reported after weak X-raying of the spleen. This vital staining also occurs in the sinus membrane.

May it not be possible that in stripping out the edematous mucosa of an antrum, substituting therefor a stratum of vascular granulation tissue, we may be performing the defensive service to the organism similar to the so-called revulsive inflammation, with "laudable" pus. In such a layer of new tissue, mesenchymal activity, elucocytic growth and antibody formation are at a high pitch. We should remember also that sterile inflammation—artificial peritonitis set up by chemical or protein irritants—will so immunize animals that they will not succumb to subsequent injection of a hundred times the lethal quantity of hemolytic streptococci. May we not then ascribe some of the benefits to our radical operation to the defense reaction after trauma, rather than alone to the removal of the purulent foci?

Local stimulation of the defense in the sinus may be brought about by an artificial febrile condition brought about by diathermy or by electric currents or from ultraviolet radiation, from quartz lamps, arc lamps or the new General Electric S-1 mercury lamp from stimulation to the reticuloendothelial mechanism contained in the capillary network of the skin. Relative freedom of the naked races of mankind from sinus disease under proper diet conditions tends to affirm this theory.

Increased phagocytic reaction of sinus membranes following injection of sterile oils, vital dyes and other contact methods of stimulating local immune reactions. Determination of the shifting of leucocytic elements of the blood "toward the left" should be made, to estimate the continuance of apparently healed infectious or the danger or relapse. Absence of such shifting will outline the relative harmlessness of severe conditions which have been reactivated.

In all these complicated matters we must enlist the guidance of immunologists, hematologists, physiologists and dietitians.

SURGERY

Wm. H. Prioleau, M.D., Charleston, S. C.

PHRENIC EXAIRESIS

The role of surgery in the treatment of pulmonary tuberculosis is rapidly increasing in importance. The object of the surgical procedures is to lessen the activity and diminish the size of the lung by decreasing the size of the thoracic cavity. Exairesis of the phrenic nerve accomplishes this by causing a paralysis of the hemidiaphragm. This operation has met with the usual successes and failures of a new procedure. However it is now upon a fairly firm basis so that its effects are quite well known. It will be well to consider it at some length as presented by Dr Ray W. Matson in his article "Exairesis of the Phrenic Nerve in the Treatment of Pulmonary Tuberculosis" which is published in the American Review of Tuberculosis, July, 1930.

The operation was first proposed by Stuertz in 1911. Oehlecker published three cases in 1913, the first of which has been operated upon in 1911. Up to 1914 twenty-six cases had been operated upon by Sauerbruck, however, only five of these cases obtained a permanent paralysis. It was not until Felix had published his article on the anatomy of the phrenic nerve that the operation received renewed attention. The cause of such a large number of only temporary paralyses was that only a simple section of the nerve had been performed, permitting an early regeneration, and that anomalies of the phrenic nerve exist in 25 to 35 per cent of the cases. These anomalies the author presents very clearly with diagrammatic drawings. From his own series of cases he concludes that unless 10 cm. of the nerve is removed, there is a 25 per cent chance of subsequent function of the diaphragm. The removal of 10 cm. has always been followed by a permanent paralysis.

The operation is performed by making a short horizontal incision above the clavicle and approaching the nerve through the subclavian triangle, just below the omophyoid muscle. The nerve normally courses along the surface of the anterior scalenus muscle, running medially and inferiorly. It is sectioned, and the distal end gradually avulsed for 10 cm. An exploration is made for accessory nerves, which if found are treated similarly. It is unsafe to make too great traction upon the nerve for it may injure the subclavian vein, the thoracic duct, the pleura, or other structures. This is especially likely in cases of anomalies and mediastinal pleurisy. Though it is a minor operation, a detailed knowledge of the anatomy of the neck is essential for its safe performance. There have been reported a number of cases of section of the vagus, sympathetic, and long thoracic nerves.

After a complete interruption of the nerve impulses, the hemidiaphragm immediately assumes the expiratory position, provided that adhesions or thickening of the pleura do not prevent it. It is motionless on quiet breathing, however on deep breathing its movement is paradoxical. The musculature atrophies, and the dome rises in the thoracic cavity. This rise may not reach its maximum for a year or more. The volume of the corresponding side of the thoracic cavity is reduced 20 per cent to 30 per cent.

The effect upon the lung is less dependent upon the site of the lesion than upon the type, In the proliferative type of tuberculosis the capacity for collapse of the diseased lung is greater than that of the healthy lung. The results are more dependent upon the rise of the diaphragm and the degree of collapse of the lung tissue affected thereby, than upon merely the placing of the diaphragm at rest.

The beneficial effect of the hemidiaphragmetic paralysis is manifested clinically by a marked reduction in the amount of expectoration. The sputum is raised much more easily and there is a cessation of the paroxysmal coughing spells. There is a rapid disappearance of fever which in itself is a

most convincing proof of the value of this procedure.

The results are difficult to evaluate as the cases reported have not been classified. In this article the author confines himself to sixty-six cases of the productive type in which pneumothorax has been tried and failed on account of pleuritic adhesions. Most were experiencing an acute exacerbation of the disease and thus were actively febrile, as well as underweight. All cases reported have been operated upon between 1924 and January, 1929.

Of this series 52 per cent were much improved and a thoracoplasty became unnecessary; they are carrying on occupational activities. They are free from fever and fatigue. They have regained their lost weight. Sputum, if present, is persistently negative for tubercle bacilli after concentration method of examination. These cases have a good diaphragmatic rise.

Thirty-eight per cent are improved. In all of these cases the sputum, although decreased, is positive for tubercle bacilli. Although most are afebrile and many have resumed partial occupational activities, they are for the most part not likely to make a clinical recovery unless other surgical measures can be or are resorted to.

Five per cent are unimproved and five per cent are worse. The latter developed bronchogenic extensions in the contralateral lung.

The author considers phrenic nerve exairesis a very valuable operation both as an independent procedure and as a preliminary to every thoracoplasty. He strongly recommends it for all patients in whom a pneumothorax is indicated but cannot be given on account of adhesions.

(The indications for this operation are steadily increasing. The tendency is to perform it early rather than to save it as a last resort. Ed.)

MINUTES

MINUTES HOUSE OF DELEGATES (Continued)

Report of Committee on Medical Education and Hospitals, F. H. McLeod, M.D., Chairman

Your Committee on Hospitals and Medical Education begs to submit the following report:

The Medical College of the State of South Carolina continues its excellent program, notwithstanding the fact that full appreciation seems to be lacking by our State Legislative body. Necessary funds have been refused, both by failure of legislative provision and the veto of the Governor.

The finances of the State of South Carolina are such that the legislative mind must retrench wherever possible, and such appropriations as can be dispensed with are justly refused as it is apparent that the burden of taxes must not be increased until general conditions improve.

The State's greatest asset is its good health, and it is the duty and privilege of every member of the State Medical Association to impress the legislative mind that health agencies must be supported and that adequate support be given not only to the State Board of Health, but to the State Medical College, that they may continue to make better doctors. That they are making good doctors is a proven fact. The record before our State Board of Medical Examiners and other state boards, is conclusive evidence that they have been well trained.

The education of the nurses is a problem of much concern. The high percentage of failures in their state board examinations is a reflection on the training school from which the nurse graduates, and is primarily no fault of the nurse.

Any woman of intelligence who has spent three years in a good hospital, with competent instructors, should easily pass the fair and just examination required of them by the State Board of Medical Examiners. This condition of affairs has gone on from year to year with but little improvement. However, your committee has no suggestions to make other than an appeal to the various training schools not to graduate a nurse who is unprepared for the state board examination.

There is continued improvement in the character of work done by our numerous hospitals and your Committee feels great pride and appreciation of the continued work of the American College of Surgeons in raising the standard of our hospitals.

This work began in 1918. 692 hospitals of 100 beds or more, were surveyed, and only 12.9% met the minimum requirements. In 1927, of 1104 surveyed, 91.2% met the requirements. In 1927, 975 hospitals of 50 to 100 beds were surveyed and 60% were approved. 376 hospitals of 35 to 50 beds were surveyed and 13.3% were fully approved. The ratios of 91.2%, 60% and 13.3% are reflections on the doctors who conduct the smaller hospitals.

To be sure there is a great deal of paper work to be done if the minimum requirements are to be met, but there is no reason why the larger hospital should have such a high percentage over the smaller hospital.

North and South Carolina have been particularly fortunate in having their hospitals participate in the Duke Endowment funds. They have aided old hospitals, aided in the buildings of new hospitals, and have aided in the care of indigent sick.

Hospitals participating in Duke funds are required to rigidly adhere to the requirements of the American College of Surgeons, and in addition, a most rigidly thorough system of bookkeeping is used. Every effort is being made to place hospital administration on a business basis and to reduce the cost of the hospital care of the patient.

Incidentally, Duke funds are available to any indigent patient at the rate of $1.00 a day. These funds are available, generally speaking, when charitable organizations, individuals, or any source whatever, provide $2.00 per day.

This is an effort to encourage hospitalization of indigent patients. Last year nearly $600,000.00 was appropriated by the Duke Endowment on this basis.

The American Medical Association accredits certain hospitals as being desirable places for interns, and in addition to the standards of the American College of Surgeons, a resident pathologist is necessary to gain this credit. This, of necessity, is a very great hardship on the smaller hospitals. Many of us believe that a real pathologist is an indispensable adjunct to surgical diagnosis. Few surgeons will accept as final the diagnosis of a pathologist who has not had proper training and years of active experience. Too much depends, and the diagnosis of a pathologist who hasn't the necessary qualifications is nothing short of a menace.

There is no shortage of laboratory technicians, many of whom know something about pathology, but it is infinitely safer for the life of the patient that a microscopic diagnosis by the operating surgeon be made as the basis of post-operative treatment rather than to accept the diagnosis of a pathologist who isn't thoroughly qualified.

This situation should work no real hardship as pathologists of recognized ability are available to all hospitals and every surgeon with little delay. One pathologist of recognized ability may serve dozens of hospitals.

The result of this situation brings to the mind of the prospective intern the idea of inadequacy and improper fitness and therefore, not a desirable hospital for his proper training, when it may be from wholly conscientious reasons a resident pathologist had not been provided.

In conclusion, your Committee wishes to express appreciation of the hospitals, doctors and the public for the increased interest in hospital standardization, and only through this spirit of cooperation can things that are ideal become material. The future of the hospital depends upon the continuation of the spirit of cooperation and your Committee believes that all hospitals will be standardized and that there shall be a growing efficiency in Hospital care and at a lower cost.

Report of Committee on Public Health and Instruction—1930

The activities of your committee during the past year have been centered on spreading the need of health education throughout the membership of this Association. Papers have been written and addresses made to this as well as to lay gatherings. In this effort we have had the support of our State Health Officer and the North Carolina Health Officer, Dr. Laughinghouse.

A bill was drafted, asking for $20,000.00 annually, for the purpose of establishing and maintaining a health education division in the State Health Dep't. It was entrusted to Dr. T. N. Dulin, of York County for presentation to the Legislature. He did not introduce it, giving his reason, sickness and absence from some of the sessions. For this reason nothing was accomplished in the way of legislation.

We are not discouraged, however, for among the physicians we found a hearty spirit of cooperation. They were willing to urge their legislators to support the bill when introduced. We regret that it was not presented.

Your committee recommends that this Body instruct the Board of Health to include in its budget for 1930 an item of $20,000.00 for establishing a health education division in the State Health Department.

G. T. Tyler, Jr., M.D., Chairman.

Greenville, S. C.

Report of the State Board of Medical Examiners of South Carolina for the year 1929

Applicants for Examination

Doctors, June examination	29
Nurses, June examination	96
Doctors, November examination	0
Nurses, November examination	110
Total Doctors	29
Total Nurses	206
	235

Doctors

White males	25
White females	3
Colored males	1
	29

Nurses

White	187
Colored	19
	206
Total	235

The Board met at Columbia, S. C., in July and December 1929 to tabulate the grades made by the applicants at the June and November examinations with the following results:

Doctors

White passed 28; colored passed 1; total	29
White failed 0; colored failed 0; total	0
	29

Nurses

White passed 151; colored passed 5; total	156
White failed 36; colored failed 14; total	50
Total	206
Grand Total	235

A. Earle Boozer, M.D.,
Secretary.

Report of Committee on Public Policy and Legislation

Thos. A. Pitts, M.D., Chairman

Mr. President and Gentlemen of
the House of Delegates:

Your Committee on Public Policy and Legislation supported in principle the Workman's Compensation Act which failed to become a law. An Act of this type would be of benefit to the medical profession at large as it would provide that companies, corporations, etc., carry accident insurance to cover medical and hospital care and a certain compensation during the disability period. This bill will probably come up again next year and we urge that you gentlemen give it your support.

A bill was introduced regulating the storage of x-ray films. This was opposed on the grounds that (1st) the bulk of films in South Carolina is in steel cabinets; (2nd) the total in any given place is not sufficient to cause great hazard; (3rd) unexposed films are kept in lead boxes; (4th) unexposed films are not dangerous of gas formation when ignited; (5th) Acitate base films (non explosive) are readily obtained at only 20% increase in cost; and (6th) that construction of a house thirty feet from the doctor's office or hospital would entail much expense for so little gained; and (7th) the fire department approved most of the methods of storage now employed.

Some phases of the so-called Nurse's Bill were opposed. This bill would have established a separate board of examiners for nurses made up of three nurses and two doctors, and a third, an appointive position, with all the powers of the other members of the board. The latter mentioned would be a nurse who would be, as we understood it, "an inspector of training schools" with the power of designation of accredited schools. Further the bill stated that only those training schools connected with hospitals, caring for an average of thirty or more patients would be accredited. This would work a real hardship on many small hospitals now doing excellent work in their respective communities.

Nursing is an integral part of medicine and we should do all within our power to aid in its progress. There is some cause for the appearance of legislative moves in our sister profession. There are probably many phases of the question of which we are totally ignorant. Therefore, your Committee recommends that two members of this organization be appointed to meet with a like number from the South Carolina Nurses Association, two from the South Carolina Hospital Association, since they are also vitally interested, and the chairmen of the Committees of Medical Affairs of the House of Representatives and the Senate, and the Secretary of the State Board of Medical Examiners. Let this group consider the question and act to meet the needs.

We recommend also that a bill be drafted and supported to cut down the time for instituting malpractice suits. Six years is the present law. We feel that this is too long as it would be very hard to establish adequate defense in alleged malpractice suits after such an interval. This was called to our attention through the American Medical Association.

We wish to thank William C. Woodward, Director of the Bureau of Legal Medicine and Legislation, of the American Medical Association, Dr. E. A. Hines, Secretary of the South Carolina Medical Association, and many others, for their valuable assistance and their responsiveness when called upon.

NEWS ITEMS

THE DOCTORS' INSTITUTE AT STATE PARK WAS A SUCCESS

Thanks to the interest and work of our Committee headed by Dr. G. T. Tyler, Jr., the Institute was attended by 30 physicians, representing 13 counties. This includes the sanatorium doctors, Dr. Hayne and three other members of the State Board of Health. The following were present:- Drs. E. H. King, Hartsville; I. S. Funderburk, Cheraw; A. L. Black, Bowman; G. C. Bolin, Orangeburg; W. P. Timmerman, and W. T. Gibson, Batesburg; H. L. Shaw and Wilton Weinberg, Sumter; J. R. McCormick, Olar; J. C. Harris, Lancaster; M. L. Parlor, Wedgefield; W. T. Lander, Williamston; I. H. Grimball and G. T. Tyler, Greenville; F. L. Martin, Mullins; W. A. Carrigan, Society Hill; A. W. Humphries, Camden; J. B. Setzler, L. Emmett Madden, T. J. Hopkins, William Weston, Jr., E. W. Barron, Thos. D. Dotterer, L. H. Jennings, Columbia; Drs. Ernest Cooper, L. F. Hall, Rudolph Farmer, State Sanatorium; Drs. Jas. A. Hayne, Wm. Egleston, E. A. Hines, Geo. W. Dick and Crow Weston, State Board of Health.

Dr. Sydenstricker and Dr. Casparis were ideal leaders for the two days.

The Committee is already considering plans for next year's Institute.

Our workers will be especially interested in the fact that Dr. Casparis considers tuberculin the main factor in the diagnosis of childhood tuberculosis. Dr. Casparis in his teachings stressed the need for early diagnosis and for public health nurses to line up the patients from by-ways and hedges.

News Letter, South Carolina Tuberculosis Association, August, 1930.

The Journal has information to the effect that a large and lucrative field of practice is vacant in Kershaw County. Further details may be secured by writing the Journal. The call appears to be urgent.

The Seventh District Medical Association will meet with the Williamsburg Medical Society at 10 A. M., September 11. Dr. W. G. Gamble of Kingstree is President and Dr. C. B. Epps of Sumter is Secretary. This Dictrict always has a fine meeting.

SOCIETY REPORTS

COLUMBIA MEDICAL SOCIETY

Second regular monthly meeting called to order by the President, J. Heyward Gibbes, at 8:30 P. M., Monday, July 28, 1930.

Minutes of last regular meeting read and adopted.

Motion that the president appoint a committee of three to investigate the milk situation in Columbia. This was seconded discussed and passed. Drs. Harmon, M. H. Wyman and Setzler appointed.

Motion made that internes from both white hospitals (Columbia and Baptist) be invited to attend and participate in the meetings. Motion passed.

Dr. Harmon reported that the library committee was still working on the plan to combine with the Columbia Library.

Committee on collections reported that they had the moral backing of the Chamber of Commerce. More time was needed to perfect the plan.

The Clinical Pathological Conference was conducted by Dr. Adcock. The case produced much discussion. His diagnosis of Hirshsprung's disease was very close, which real condition was disclosed by Dr. Madden as a Congenital Redundant Atonic Colon. Case died of a myocardial failure.

Twenty-seven members present.

Society adjourned at 9:45 P. M.

William Weston, Jr.,
Sec. Col. Med. Society.

Dr. James Claude Bonner, age 41, died of uremia early Tuesday morning following a fall in which both patellass and his right arm were fractured. He was assistant head of the Tuberculosis Sanatorium at State Park, S. C. He was a member of the Columbia Medical Society—its members will deeply feel his absence.

William Weston, Jr.,
Sec. Col. Med. Society.

COLUMBIA MEDICAL SOCIETY

The Columbia Medical Society. Monday July 14, 1930.

Meeting called to order by the President, J. Heyward Gibbes, at 8:30 P. M.

Under clinical cases Dr. W. R. Barron presented 3 cases of ptosed kidneys. The first case had been dilated 18 times for stricture of the ureters. The second case had strictures of both ureters and ptosed kidneys. The third case had a prolapsed kidney which had been suspended. Indications for suspension were discussed.

Dr. Allison discussed a case of tumor of the second sterno-clavicular joint in a young woman. Advised against giving anti-luetic treatment in a patient with a 2 plus Wassermann.

The chief speaker of the evening was Dr. Olin Chamberlain of the S. C. Medical College at Charleston, S. C. His subject was "Cerebral Vascular Disease." His talk was illustrated with lantern slides. It was enthusiastically received as many entered into the discussion.

The second speaker was Dr. Fred Williams of Columbia, S. C. His paper was "Introspection as Result of Medical Examination." This subject was thoroughly enjoyed.

Dr. F. M. Durham moves that a committee draw up resolutions regarding Dr. Theodore Hayne who died in Africa this month of yellow fever. Motion seconded and passed. Dr. F. M. Durham and McDonald appointed.

About 40 members and several guests present.

Meeting adjourned at 10:45 P. M.

F. Eugene Femp, M.D.,
Acting Secretary.

COLUMBIA MEDICAL SOCIETY

Meeting called to order by order of President, Dr. J. H. Gibbes, August 11, 1930, 8:30 P. M.

Minutes of July 14, 1930 read and adopted.

Dr. Bunch's paper presented an interesting case and outlined in detail the operation findings including the extremely and torturous vessels about the stomach and the heavy leathery adhesions to the spleen. Also the complete pathological report was given. The similarity in this case to Banti's disease and the typical findings in the spleen of tuberculosis were pointed out. Dr. Bunch also pointed out the fact that the opinion on Banti's disease is changing and that it is now considered probable not a definite disease entity. A good report of the literature on tuberculosis of the spleen was given. Lantern slides presented.

Discussed by Dr. L. E. Madden and Dr. Heyward Gibbes who pointed out again clearly what was meant by primary tuberculosis of the spleen —that true primary Tb. of the spleen probably did not exist but that the original focus had healed and left what was apparently a primary condition.

Pathology of acute osteomyelitis with demonstrations by Dr. Julius H. Taylor.

The histology of bone reviewed by lantern slides and description and the smallest features were well brought out. The cause of the more common location of origin of ost. my. in the metaphysis

shown by the mechanical slowing of the blood stream at this point. Staph aur. most common causative organism.

The etiology and pathology were particularly well taken up and the most obscure points brought out. Lantern slides showing various pathology. changes in ost. myel. were also shown.

Discussed by Dr. A. T. Moore, Dr. W. J. Bristow. There was a discussion of osteomyelitis, particularly in reference to that of the frontal bone. Discussion closed by Dr. Taylor.

Dr. Madden made a plea for more autopsies.

Adjourned 10:25 P. M. Twenty-six members present.

Respectfully submitted,
J. T. Quattlebaum, acting sec.

COLUMBIA MEDICAL SOCIETY

Meeting called to order by the vice-president, Harry H. Griffin, at 8:35 P. M., August 25, 1930.

Minutes of last regular meeting read and adopted.

Dr. Harmon reported on library committee that they had acted for the society and rented a room from Mrs. Woodrow which adjoins the Columbia public library and will be run in conjunction with the same.

The money was advanced by Dr. Harmon being $950 (nine hundred and fifty dollars). The contract covers the rental as long as the Columbia Public Library remains there as a rentee from Mrs. Woodrow—which would be five to ten years.

Dr. M. H. Wyman moved that the society thank the committee and adopted their plan which was duly seconded and passed.

The president (Dr. J. Heyward Gibbes) the secretary (William Weston, Jr.) and the treasurer (Ben H. Baggott) will manage the reimbursion of Dr. Harmon.

The chairman of the credit committee reported that the chamber of commerce could not lend their moral support in writing as so many other organizations would demand the same. Dr. Harmon, as chairman, recommends to the society that they adopt Mr. McKnight's plan and use it if they choose. Motion that the committee be thanked and they continue to act. Seconded and passed.

Milk Committee headed by Dr. Harmon said that they had not met with the City Board of Health but asks for more time which was extended.

Doctor C. H. Epting elected a member of the Columbia Medical Society.

Dr. Chapman J. Mullins elected a member of the Columbia Medical Society.

Dr. M. H. Wyman presented an interesting case of sudden death which was a tumor of the sella turcica portion of the brain. The question of sudden death was not definitely determined.

Twenty-two members present.

Society adjourned at 9:30 P. M.

Respectfully submitted,
William Weston, Jr.,
Secretary.

SPARTANBURG COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Spartanburg County Medical Society was held Monday, July 28, 1930 at 7:30 P. M. at Camp Franklin.

About thirty-five members and guests were present. We were served a very delightful supper by Mrs. James and her staff, of Camp Franklin, after which the minutes of the previous meeting were read.

Dr. Frank Howard Richardson talked on "Posture in Children." Dr. Richardson stated that there were four main posture defects; first, round shoulders; second, weak abdominal muscles; third, weak hamstrings; and fourth, flat footedness. He also stated that many children have all of these defects.

Ordinary calisthenic exercises are usually not sufficient because they are not practiced at regular intervals, and are not made interesting enough. Dr. Richardson stated that some of the physical culture instructors recommended games in which the children attempted to imitate the pose of animals such as; duck running, elephant walking, and standing like a giraffe. In trying to imitate a duck, the child throws his shoulders well back and holds his arms at the sides with his chest well out. This is very effective in correcting round shoulders. Walking like an elephant on all fours helps in stretching the hamstring muscles. Children with weak hamstrings are unable to touch the ground with their fingers. All the muscles are strengthened by rowing exercises. Standing flat on both feet and trying to touch the ceiling is also good postural exercise. Dr. Richardson has recently written a book on the subject and it has just been published.

Dr. Horton Casparis discussed the causes of infant mortality. He recommends taking a Wassermann on every mother and in the earliest stages of pregnancy if possible. Treatment of syphilis in early pregnancy often prevents miscarriages and stillbirths and is much more effective than after the birth of the child. Even though the mother is discovered to have syphilis two weeks before delivery, anti-syphilitic treatment should be begun immediately.

Dr. Casparis also emphasizes the necessity of watching the baby's nutrition in the first month as the breast milk is often insufficient. Constipation, colic, and sometimes diarrhoea are often due to insufficient food.

There being no further business, the meeting was adjourned.

C. W. Bailey, Pres.
W. M. Sheridan, Sec.

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PUBLIC HEALTH

B. F. Wyman, M.D., Columbia, S. C.

EDITORIAL

KEEP UP THE SCIENTIFIC SPIRIT

In times of financial depression the doctor may feel that there is some excuse for a let down in keen scientific interest in his profession owing to the lack of funds to take frequent post graduate courses, to buy new books and apparatus, etc. It is a bit discouraging 'tis true but probably the greatest advancements in the arts and sciences have nearly always been made under adverse circumstances both by individuals and institutions. There is a challenge in the times to become better doctors, to make use of the means at hand to better advantage.

In reading the comments on the attitude of the profession in the war stricken countries of Europe we have been impressed that they have kept up their scientific spirit to a remarkable degree often in extreme poverty. It is inspiring to note these reports by medical travelers as well. This country will probably never know comparable handicaps to the same extent.

The fall and winter approaches and it is a good time to renew our resolves to take a greater interest in our local medical societies, to attend the staff meetings of our hospitals more regularly, to read assiduously the books and journals available. In fact to spend more time than we have ever done before in equipping ourselves mentally for the practice of medicine.

FOURTH DISTRICT MEDICAL SOCIETY TO MEET AT SPARTANBURG

One of the largest and most successful district medical societies in the South Atlantic States is the Fourth District, comprising as it does seven of the most prosperous and thickly populated counties of the Piedmont Section of the South. The tentative date has been fixed for October 15, at 10 A. M., Spartanburg. President L. G. Clayton of Central, the Dean of the medical profession in the district, assures the members that the program will be unusually attractive. It is not too much to hope that one hundred doctors will be present. The city of Spartanburg always entertains in a royal manner and therefore medical meetings

there never fail to have a large attendance. The titles of the papers should be sent at once to Dr. W. A. Strickland, Secretary, Westminster.

RESOLUTIONS ON THE DEATH OF DR. THEODORE BREVARD HAYNE

The following resolutions were adopted by the Columbia Medical Society at the meeting held Monday, September 8, 1930, 8:30 P. M., Columbia, S. C.

Theodore Brevard Hayne was born August 3, 1898 at Blackstock, S. C., at which place part of his boyhood days were spent. He was the eldest son of Dr. James A. Hayne and Fannie Thorn Hayne. His father at the time of his birth was serving in the U. S. army at Chicamauga, Ga. At the close of the Spanish-American War, Dr. James A. Hayne returned to Blackstock, S. C., and resumed his practice. After a short stay the family moved to Washington, D. C., where Theodore attended school. His next school days were spent in Greenville, S. C. In 1907 his father went to Panama, where his family later joined him. Theodore was employed in the Engineering Building as a messenger at 9 years of age, being the youngest employee of the Panama Canal Commission. In 1909 his father while a surgeon in the army was stationed at Fort Assimibonie, Montana, from which place Theodore went, at the age of 12 years, to Porter Military Academy, Charleston, S. C., which he attended for 4 years. Following this he attended the Citadel. During the World War he was in training at Seattle, Washington, in the U. S. Naval flying school. Subsequently he returned to the Citadel and graduated therefrom in 1920.

After completing his college work he accepted a position with the U.S.P.H.S. in malarial work, which carried him into Miss., Georgia, Louisiana, Ark., and Florida. In this work he was early associated with Dr. Henry Carter of the U. S. Public Health Service, one of the greatest scientific experts in malaria and yellow fever, and with Dr. M. A. Barber, malaria expert of the U. S. Public Health Service, and Mr. J. A. LePrince, Chief Sanitary Engineer of the U. S. Public Health Service. While associated with Dr. Barber the discovery of the killing of the mosquito larvae by Paris Green was made and in a pamphlet gotten up by Dr. Barber, Theodore was given credit for this work. This was prior to his studying medicine.

His close association with these scientists stimulated his scientific trend and love for investigation. Even before this work he had made a survey of Little Salkehatchie Swamp in Colleton County, S. C., this was done at the age of sixteen years. - Work was also done at Edgefield, S. C. and one particularly outstanding piece of work was done in Chester County, S. C., on the Catawba River, in which the flight of the anophelene mosquito was determined by staining them with an aniline dye, and afterwards discovering the stained mosquito. It was then proved that a flight could be made of one and one-half miles. A stained mosquito was discovered after having crossed the Catawba River, which was contrary to the held opinion that mosquitoes could not cross large streams.

In the fall of 1923 he left the U.S.P.H.S. and entered the Medical College of the State of South Carolina, graduating in 1927. Following this he served an internship at Gorgas Memorial Hospital, Ancan, Canal Zone, Panama. After completing his internship he went with the Rockefeller Foundation and was sent to Lagos, Nigeria, West Africa, where he remained for eighteen months and returned to the home of his parents who are now living at Congaree, S. C. In January 1930 he married Miss Ann Roselle Hunley of Lynchburg, Va. He left on March 29 for a return to duty of eighteen months in Africa. At Lagos his duties with the Rockefeller Foundation required constant association with the laboratory investigation of the cause and prevention, if possible, of yellow fever. He became ill July 7, 1930 and died July 11, 1930 of yellow fever. During his investigation Theodore discovered that in many broods of mosquitoes dwarfs were often present, and he took precautions to use small mesh wire containers. It is supposed that one of the small infected mosquitoes escaped and bit him, thus producing the disease that caused his death.

His remains were brought back to the U. S. on the Steamship West Kedron of the West African Line, arriving at New York and thence by Clyde Line to Charleston, S. C., from there to Congaree, S. C., where interment took place Sunday, August 31, 1930 at St. John's Episcopal Church. Services were conducted by Dr. D. M. Douglas, President of the University of South Carolina, and Dr. G. Croft Williams, rector of St. John's Episcopal Church, Columbia.

Dr. John A. Farrell of the Rockefeller Foundation says "his loss to the Foundation is irreparable," and Dr. F. F. Russell, also of the Foundation under whom Theodore served in Africa, said that he felt that no one could replace him in the African Yellow Fever work.

Theodore knew the great danger of this work and that a slight error or carelessness in technique, just for a moment, might at any time cause his death as the great Noguchi and Stokes had lost their lives while doing similar work in Africa.

It was the love of science and not for the strains of martial music nor the cheering of his comrades that made Theodore so nobly sacrifice

his life, a martyr in the service of mankind fighting an invisible foe.

Therefore, be it resolved by the Columbia Medical Society that in the death of Theodore B. Hayne the medical profession of our county and state and nation has lost a noble hero, a young scientist who died for the love of science and humanity. He had great advantages and availed himself of all of them.

The loss of such an educated young physician is irreparable, yet we bow in humble submission to the all-wise Creator.

Resolved, further, that a copy of these resolutions be sent to the Journal of A. M. A. and local press for publication; that a page in our minutes be set aside and dedicated to his memory, and a copy of these resolutions be sent to his wife and parents.

Respectfully submitted,

F. M. Durham, M.D.

Roderick Macdonald, M.D.

Committee from the Columbia Medical Society.

ORIGINAL ARTICLES

RESECTION OF PROSTATE GLAND OBSTRUCTION*

By T. M. Davis, M.D., Greenville, S. C.

Any transgression of the accepted surgical procedures is always regarded with skepticism, new theories and practices are accepted only after actual beneficial results have been demonstrated upon a sufficiently large series of cases. Our profession has always had pioneers who were reluctant in accepting the then present practices as final, to these our profession is indebted for its present attainments.

The surgical management of the obstructing prostate gland is an example of this. For many years the adherents of the supra-pubic; were reluctant in accepting the advantages heralded by proponents of the perineal operation and visa versa. It is generally conceded that both operations are effective, if properly performed. During the present decade there is dissention as to the efficacy of the trans-urethral methods relieving the obstructions of the prostate gland, that the majority assert can only be relieved by open surgery.

Review of statistics reveal that prostatic obstruction is responsible for a tremendous mortality. A better understanding of the types of obstruction with its effects upon the upper urinary organs, improvement in the laboratory methods, for determining the amount of renal damage, the improvement that various remedial agencies have in restoring the renal function, refinement in the operative technique and anesthetics used, have notably reduced the mortality, in spite of this the mortality is still rather high. Caulk, reports in a recent article, "That in some of the municipal clinics, a mortality of as high as 50%, this included moribund and profoundly uraemic cases that were beyond rehabilitation on admission, as well as those that appeared to be fair operative risks, but succumbed to major surgical operations."

Any condition that is so potent of danger in its advanced stages, should emphasize the importance of educating the general physician to the dangers of procrastination, usually assumed on the initial symptoms of prostatism, to prevent these cases from becoming those with advanced obstruction by offering to their patients, modern methods of correction early, before the advanced damage to the upper urinary organs have occurred by reason of the obstruction.

The prostatic with the complications concomitant with age is not to be blamed for bolting at so serious a procedure, as the operation for the removal of the prostate gland, with loss of his sexual function, in spite of the more favorable statistics, that show a mortality of 3% in the hands of the most skillful urological surgeons and a much higher mortality in the hands of the less skilled. We often have this mortality presented to us many times when it is least expected.

Prostates apparently do not increase in size indefinitely, the gland probably reaches the maximum size (exclusive of malignancy) within a comparatively short time, (several years), in most instances it produces few symptoms until some outside influence causes acute congestion or inflammation, such as exposure to cold, alcoholism, sexual activity, etc. This gland in many individuals incites a false sense of ability and an hour spent in following this "will of the wisp" has led many a man to the hospital where he lost not only his desire but his prostate as well.

A large prostate might cause slight back pressure with almost negligible residual urine, whereas one whose enlargement is hardly perceptable by rectal palpation can give rise to complete retention. Examination by the cystoscope and at autopsy has demonstrated that it is the intra-vesical and intra-urethral encroachment of the gland that causes the obstructive features of prostatism. Rectal palpation is an aid, relying upon this examination alone has led to numerous errors in the diagnosis and it is only by a complete cysto-urethroscopic examination with visualization of the conditions

*Read before the South Carolina Medical Association, Florence, S. C., May 7, 1930.

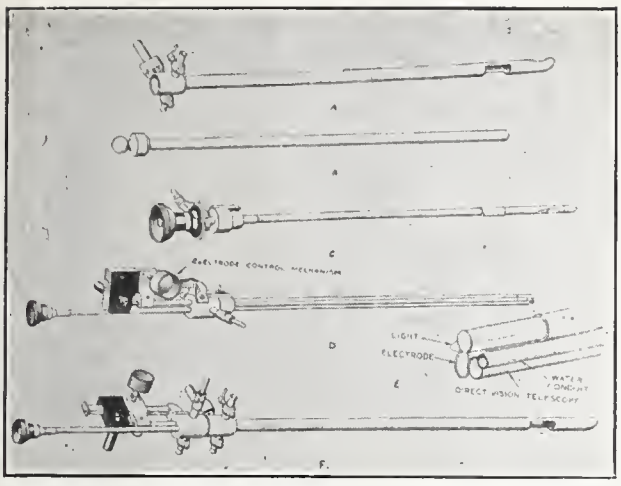


Fig. 1—A Sheath; B obturator; C. examining telescope; D working parts, consisting of direct vision telescope, water conduit, light carrier and cutting loop; E end of working parts enlarged; F instrument assembled; loop may be observed in fenestrum. (courtesy of Dr. M. Stern).

as they actually exist, that the true nature of the obstructive lesion may be determined.

For many years it has been the ideal of urologists to relieve obstructions of the vesical orifice, without resorting to major surgery. A notable advance was made in 1909 by Young, when he introduced his punch instrument for the relief of the obstructions caused by median bars and contractured vesical orifice. Before the introduction of this instrument, these obstructions were treated by major surgical operations, certainly no competent urologist would today resort to open operation for the relief of these types of obstruction. In 1919 Caulk improved the punch instrument by the use of his cautery blade to sever tissue and control the hemorrhage. In a recent article Caulk reports a series of 510 cases operated upon in the past ten years with excellent results. He reports that he employed his operation in 85% of all types of obstruction that came under his care within the past year, that after a period of ten years application of resection, that it can be employed in a majority of all types of prostatic hypertrophy and cancer with excellent results.

Math'e, Frischer, Collings, Stern and others have reported excellent results in various types of obstruction treated by means of various types of transurethral electro coagulation.

Since the invention and introduction of the "Resectoscope" by Stern, the author began the use of this instrument in the correction of vesical orifice obstructions. The instrument as presented by Stern and the technique described by him, left much to be desired. Hemorrhage was frequently encountered, without provision for its control. The author has made improvements in the original instrument, designed special methods and instruments for the control of hemorrhage and developed the technique of the operative procedure that permits the correction of all types of prostatic obstruction.

The results obtained with this operation over a period of three years, on one hundred and twenty-three cases are all that the most pessimistic could desire. The operation is not as many suppose, the mere removal of a few pieces of tissue from the vesical orifice, the entire lobes of the prostate may be removed. It is familiarity of the vesical orifice, the ability to determine the exact tissue that is causing the obstruction and the adapting of the operation to the individual case, with patience and perseverance that insures success.

The author has often been accused of having an unlimited amount of patience, it is true that it may require more time and perseverance in the management of these cases by resection than with the open operation. Which is preferable? A certain amount of patience on the part of the surgeon during the operation, that has had no mortality, a hospitalization of several days, usually without physical discomfort, or a rapid operation with a recognized high mortality, a hospitalization of several weeks with its economic consideration, weeks of untold suffering and a disability of several months following the discharge from the hospital, with an end result that is certainly not any better than that obtained by the minor operation of resection?

Cases treated by resection have had the usual complications concomitant with age and obstruction, varying in each case with the age of the patient, the degree and duration of the obstruction. The symptoms such as frequency, urgency, difficulty, dribbling, retention, incontinence of retention and the general symptoms of uraemia and circulatory embarrassment, have been identical with those reported by surgeons who have offered enucleation for a cure.

The preparation of patients for resection is the same as that usually employed in all types

of obstruction, i. e. forced fluids, alkalies when indicated, relief of the retention of large residual by gradual decompression with a retention catheter, appropriate treatment for cardiac complications when present.

In cases with extremely large bilateral lobes, the length of the anesthesia may not permit the removal of both lobes at a single operation. Requiring what the author has termed a two stage resection, i. e. the removal of one lobe at the first sitting and the other in about ten days. Reoperation has been necessary in only six cases (exclusive of malignancy) in which the two stage operation was not anticipated before the initial operation, two of these were necessary on account of failure in the instruments before the author obtained duplicate equipment, the other four were in the earlier cases in which sufficient tissue was not removed. This should have been expected with an operative procedure in which the operator was pioneering and had not developed his technique and had to learn from experience upon the living subject the amount of tissue to be removed, with an armamentarium that was not perfected as at present.

Anesthesia—The anesthetic used in all cases has been sacral or caudal block, induced by injecting 20 c. c. of a 3% novocaine solution through a spinal needle placed within the sacral canal. Anesthesia has been ample in every case for about three hours, permitting of extensive resection without the slightest discomfort to the patient. The technique of sacral anesthesia is familiar to all and the limited time does not permit of a detailed description.

Complications following resection have been surprisingly insignificant only three cases of the series, required morphia or other sedative for the pain and these only one or two doses. There has been a slight elevation of the temperature for twenty-four to forty-eight hours, one case had a chill and temperature of 104.2 F. that I am certain was due to the breaking off within the catheter of the cork used to plug it, the patient voiding his urine around the catheter during the first night following the operation, the temperature in this case was normal in thirty-six hours.

Hemorrhage—The urine passed following resection is usually clear or slightly pinkish in color, only one case has had bloody urine, this was a patient with villous carcinoma, that was bleeding on admission, during the operation it was found that the bleeding was from an area to one side of the gland that could not be reached with any instrument at hand. Cystotomy was necessary to control the hemorrhage, this is the only case that has required an open operation following resection. An excellent opportunity was afforded to examine the vesical orifice after resection, the amount of tissue that had been removed, left a cavity as large as would have been left after the enucleation of a prostate the size of a lemon, the fossa was clean and free from hemorrhage. (Instruments are being manufactured to control hemorrhage lateral to the prostate, should the occasion again arise).

One case of secondary hemorrhage has occurred on the tenth day, after operation, following a fifty mile automobile ride, the hemorrhage in this case was easily controlled by coagulation per urethra of the bleeding vessel.

Two cases of epididymitis have occurred, both in the second week after operation, one after the patient had set out onion sprouts the day before, the other after a lengthy horse back ride, both cases subsided within a week without other complication.

Tabulation of cases resected:

Contracted vesical orifice	11
Median lobe or bar formation	23
Unilateral and median lobe	17

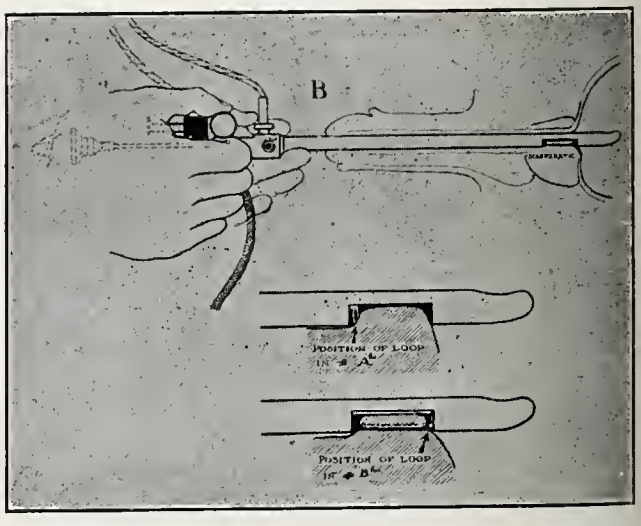


Fig. 2—Instrument in operation. B shows instrument in urethra; enlarged cuts, upper, tissue protruding within fenestrum, loop resting upon tissue; lower, loop has passed through tissue.

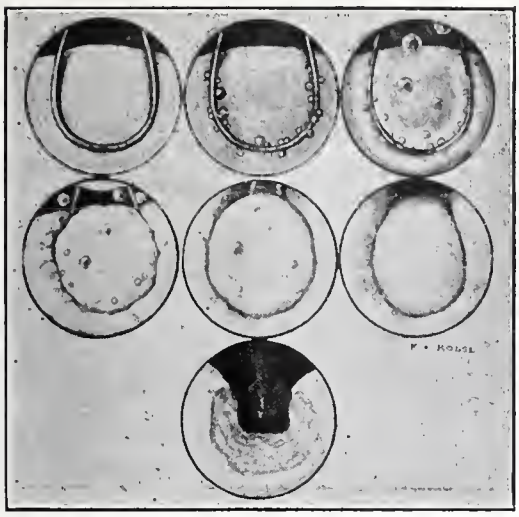


Fig. 3—Cutting loop as observed through direct vision telescope in various stages of operation resulting in gutter formation.

Unilateral lobe	4
Bilateral lobes	31
Bilateral and median lobes	16
Carcinoma	17
Following recent prostatectomy, for lobe overlooked or recurrence	4
Total cases resected	123

I have selected the following cases from my series that I will report briefly.

Case 1. S. M. M. age 68, general condition fair, B. P. 160/90 marked frequency, tenesmus, residual 12 ounces. Prostate or rectal palpation large. Cystoscopy, revealed, large intravesical bilateral and middle lobes, marked trabeculation with several cellules. Resection, both lateral and middle lobes removed, time 2 hours 25 minutes. Convalescence uneventful, one month after operation, urine normal, no residual, voids once nightly. Two and one-half years after operation, patient reports occasional night voiding, normal day voiding, general health excellent, no residual, sexual function fair.

Case 2. A. W. age 73, farmer, general condition poor, B. P. 210/110 dyspnoea, marked frequency, dribbling, residual 11 ounces. Prostate on rectal palpation very large. Cystoscopy revealed, very large bilateral intravesical lobes, trabeculated bladder with a small diverticula. Resection, two stage operation, left lobe resected 1 hour 45 minutes. Eight days later right lobe removed, time 1 hour 35 min. convalescence uneventful, patient voided freely 3 days after second operation. One month after operation no nycturia, voids every 3 hours daily, urine normal, one-half ounce residual. Two years after operation patient is in excellent health, B. P. 160/90 voids occasionally once at night, one-half ounce residual. Sexual function normal for age.

Case 3. Rev. J. C. M. age 66, general condition poor. B. P. 190/100 marked frequency, with acute retention, voids only few drops at a time. Prostate on rectal palpation not enlarged, notch broadened. Cystoscopy, reveals a large median lobe. Trabeculated bladder, with a small olive size stone in bas fond. Residual 36 ounces. Gradual decompression for five days with retention catheter. Resection, time 1 hour, entire median lobe removed. Convalescence uneventful, stone crushed with cystoscopic lithotrite on tenth day. Patient voids with large stream, one ounce residual. Three years after operation patient voids once at night, normally during the day. States that his health is best in ten years.

Case 4. A. W. S., age 63, mill president, general condition good. B. P. 140/85. Marked frequency, dribbling, infected urine, residual 8 ounces. Prostate on rectal palpation enlarged fibrous type. Cystoscopy revealed moderate intravesical lateral lobes with collar formation around sphincter, trabeculated bladder, right ureter has slit of former intravesicular extraction of stone through suprapubic opening 15 years previously. Resection, time 2 hours, the

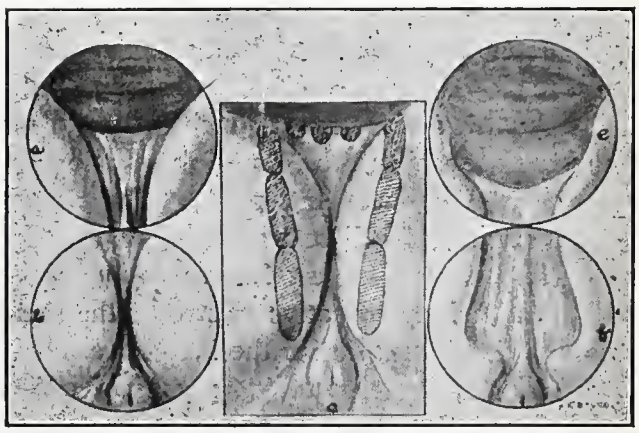


Fig. 4—Artist's sketch of prostate, a lateral lobes vesical aspect; b lateral lobes encroaching upon posterior urethra; c diagram showing lateral sections, several sections in floor of sphincter; e, f vesical and urethral views showing reduction of lateral lobe obstruction.

entire lateral lobes and floor of the sphincter removed. Convalescence uneventful, patient voided large stream second day after operation. Patient returned to work five days after operation. One month after operation urine shows slight infection, no residual. Voids occasionally once at night, normal day voiding. Two and one-half years after operation, patient reports that he does not void at night, urine normal, no residual, general health best in five years. Sexually active.

Case 5. H. J. negro, age 67, laborer, admitted to hospital in moribund condition, markedly odematous, dyspnoea, semi-conscious, scrotum markedly odematous, B. P. 220/110. Blood chemistry shows, marked retention, gradual decompression for ten days, forced fluids, alkalies, etc. Prostate on rectal palpation large. Cystoscopy, revealed, large bilateral intra-vesical bilateral and median lobes, residual on admission 38 ounces. Resection, two stage, time first operation, 2 hours, right lateral and median lobe resected, second operation ten days later, time 1 hour 40 minutes, left lateral lobe resected. Patient voided large stream three days after second operation. Convalescence uneventful. Two months after operation, urine normal, no residual, patient does not void at night, patient reports, one and one-half years after operation, free from urinary symptoms, no night voiding, no residual, sexually active, has worked at hard labor since two weeks after leaving hospital.

Instruments: The instruments used in resection are, the resectotherm, for generating the cutting current, the diathermy generating machine for the control of hemorrhage and the resectoscope. The resectoscope consists of a sheath with a fenestra 5/8 inch in length near the beak, an obturator, an observation telescope, and the working parts. The working parts consists of a direct vision telescope, a light carrier, a water conduit for continuous irrigation and a loop or active electrode, the sheath carries the receptacle for the inactive electrode. The loop is made of tungsten wire placed at right angles to a specially insulated shaft that is connected to the instrument with a rack and pinion, in such a manner as to be made to traverse the length of the fenestra when desired. The loop is situated just in front of the direct

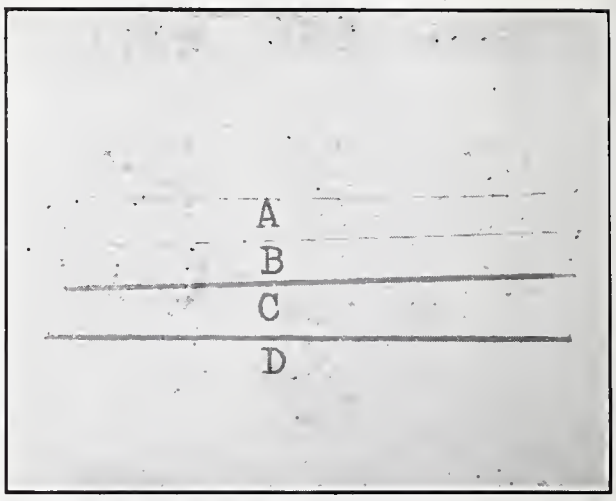


Fig. 5—Details of author's improvement in loop electrode; A electrode as supplied with resectoscope by manufacturer; straight shaft to loop on tip; B electrode as made by author. Note bend in silver tubing, near loop. C insulated shaft for electrode made of metal with hard rubber core, except for a short length of quartz tubing at loop end for mounting loop. D complete electrode. (authors note,—Manufactured article depended upon shellac to hold loop rigid within quartz tubing, Bending the silver tubing holds loop rigid regardless of shellac which melted when a heat producing current was used, allowing loop to wobble and short, the author uses porclean in place of shellac in the latest loops.)

vision telescope and may be seen resting upon the tissue protruding within the fenestrum prior to its resection and may be observed throughout the entire excursion during the section. Sheaths of 27 F. and 30 F. with fenestra 7/8 inch in length have been made for the author.

The original loops supplied with the resectoscope were fragile and would not permit the use of a heat producing current to be imposed through the loop without destruction of the loop as shellac was used to hold the loop wire rigid within the quartz tube of the shaft. The author has improved the loops, making the diameter about twice the original size, the use of a piece of silver tubing to connect the loop with the connecting wire, bending the silver tubing in such shape that when it is pushed into the quartz tube of the shaft, the loop is held rigid by the spring tension of the silver tubing, shellac is used only to prevent current loss into the bladder fluid. Heat to the production of redness in the loop wire does not cause the slightest deteriation in the improved loops.

The perfection of the loops permitted a notable improvement in the technique of the opera-

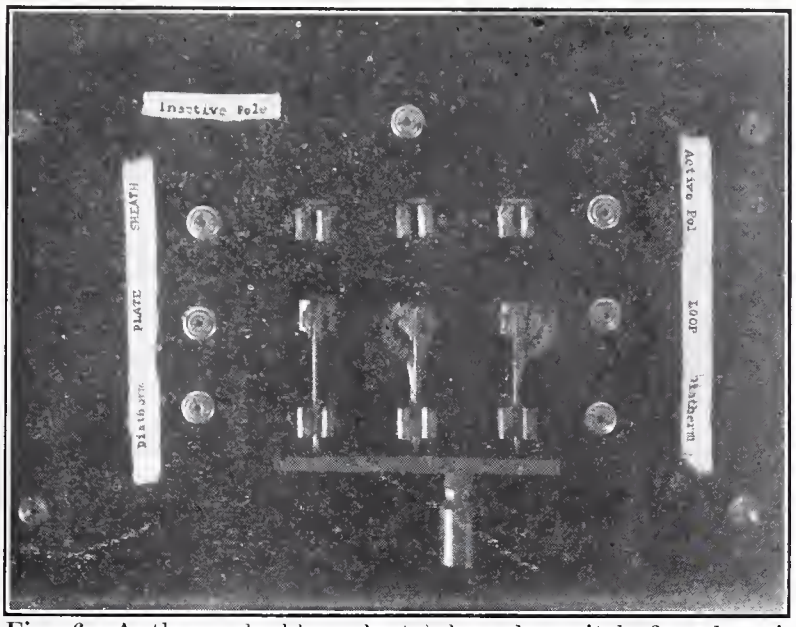


Fig. 6—Authors, double pole triple pole switch for changing from cutting current to diathermy current or the reverse, (authors note, since presenting this paper the author has constructed a magnetic double action triple pole directional switch that, permits control of the currents by operation of the foot switches without manual control).

tion, the use of a more powerful cutting current, that slightly coagulates the tissue and controls most of the hemorrhage at the time of section. The use of diathermy current through the loop for the control of hemorrhage as will be described later.

The author designed and previously described a special telescope with working parts, that permitted the use of a fulgerating electrode to be used through the resectoscope sheath to coagulate bleeding vessels. The changing of the working parts of the instrument with the conducting cords and water conduit, the time consumed in locating the bleeding vessel after the change had been made, greatly prolonged the operation. The improvement in controlling hemorrhage with the loops without loss of time may be appreciated.

The changing from the cutting to the diathermy current on the loop for the control of hemorrhage, necessitated the changing of several wires at each change of current. The construction by the author of a triple pole, double throw switch, permits of the instantaneous interchange of currents, changing the polarity of the switch by hand and changing the foot from one foot switch to another, may be accomplished without visualization of the operative field being momentarily lost from the field of vision, the advantage of this will be apparent during the description of operative technique.

Large quantities of sterile water is required during resection to obtain clear vision of each operative manipulation. The author has an elaborate system for maintaining a continuous supply of sterile water. Two large sterile water tanks are placed near the ceiling of the operating room, the pipes from the water and gas lines are insulated from the tanks, to prevent a direct ground. The water from the tanks is piped to the irrigating reservoirs, within each reservoir is a float valve arrangement that keeps the reservoir full during the operation, without the attention of the operator. The drainage pan of the operating table is connected to the sewer line, by a rubber hose connection, this allows free movement of the pan and drains the water used, keeping the pan dry during the operation.

Technique of operation: The resectoscope is introduced into the bladder and the obturator is removed, the bladder is irrigated until the water returns clear, 200 c. c. of water is left within the bladder and the observation telescope is inserted. A detailed examination of the vesical orifice and posterior urethra is made, the site and amount of obstructing tissue to be removed is determined. The observation telescope is replaced by the working parts, the conducting cords and water conduit are connected,

(a 6/8 tin foil plate having previously placed under the patients buttock and properly connected to the triple pole switch, this plate is the inactive electrode). The switch is placed in cutting position, the site of the initial section is selected and made to engage within the fenestrum, the current is turned on with the foot switch, observing the loop, bubbles will begin arising and a halo formed around the loop, the loop is slowly advanced the entire length of the fenestrum, removing a section of tissue 2 c. m. in diameter and 3/4 inch in length, leaving a gutter much larger than the section of tissue removed, as there is dissolution of the tissue, caused by the rapidity of the current oscillation, producing a molecular rupture of the tissue cells between the loop and the sheath. With water flowing through the continuous irrigation conduit, the gutter is observed for a few seconds, to determine the presence or absence of hemorrhage, if hemorrhage occurs, the polarity of the double throw switch is changed, this automatically changes the cutting to the diathermy current on the loop, changing the foot to the diathermy foot switch, using 600 m. a. as the loop is slowly returned through the gutter formed, the diathermy current will be observed to follow the stream of blood to the vessel, (as a bolt of lightning through the sky) immediately coagulating the vessel with control of the bleeding. The double throw switch is reversed and another section is made, hemorrhage is controlled as often as necessary, repeated sections are made until the desired amount of tissue is removed.

The resectoscope is the only instrument that permits of accurate observation of every detail of the operative procedure and with which sufficient tissue may be removed to correct all forms of prostatic enlargement with the accuracy of a cystoscopic observation.

In median lobes and contractures, sufficient parallel sections should be removed from the floor of the sphincter to completely remove the obstruction. In lateral lobes, that encroach upon the posterior urethra, numerous sections are removed from each lobe, beginning at the vesical aspect making a section, additional sections are made in a continuous line, having the proximal edge of the preceding section in view at the distal end of the fenestrum, remembering that 3/4 inch of tissue is removed at each section, sufficient parallel lines are made in each lobe to completely remove the obstructing lobes, resecting one lobe at a time. The veramontanum may be used as a landmark for urethral orientation, the prostate does not cause obstruction anterior to the vera except in malignancy.

Sufficient tissue having been removed and all hemorrhage arrested, the sections of tissue are flushed from the bladder through the sheath and a 16. F. soft rubber catheter, with multiple eyelets is left in situ, for twelve to forty-eight hours. Patients are usually hospitalized for three days after the operation, all cases on discharge have been voiding a large stream, without difficulty. Cases in which a two stage operation is necessary may be kept in the hospital or discharged until the second operation is performed.

Summary: The general practitioner should be educated to the dangers of advanced prostatism and to the importance of early correction of obstruction before renal damage has occurred.

The operation of resection is a minor one, with practically no mortality (no mortality in the authors series), with results that are as satisfactory, as those obtained with major operations of prostatectomy with its rather high mortality.

Patients can be relieved by resection that could never be converted into fair surgical risks for prostatectomy.

Resection does not interfere with the sexual function that prostatectomy practically always destroys, this feature alone deters many from seeking needed relief of obstruction.

Patients are rarely confined to the hospital for more than three days, the majority resume their vocations within one week after the operation.

DISCUSSIONS

Dr. Milton Weinberg, Sumter: I am afraid Dr. Davis has left an impression that this procedure which he uses most skilfully is of a minor nature, and is rather overenthusiastic about it. In his results I am afraid he has used up about all the luck he has.

To begin with, though I have not done the resection with this resectoscope, yet it is the

same procedure in principle as any type of punch operation. These things, first, are done on old people. Second, in the preparation of these cases the same routine is carried out as you do preliminary to a prostatectomy—that is, drainage, whether it is suprapubic or whether it is by the indwelling catheter. I can not classify the thing as a minor procedure. The cases that I have had, I hospitalize, and the other urologists that I know anything about hospitalize these patients for the punch operation or any instrument method of excision of tissue; and I am afraid that Dr. Davis, in allowing these patients to go home and reporting no hemorrhage, etc., and only a few patients requiring morphine, etc., I am afraid he has used up all the luck he has.

Dr. Davis seemed to stress the high mortality of the operative procedure. Personally, I do not think it is high. When we have a mortality of only from four to six per cent for the open operation, I think that is quite low compared with other major procedures.

I believe Dr. Davis is using this procedure, from the standpoint of fundamental principles of surgery, in cases in which it is not indicated; and that is in those cases of median and lateral enlargements of the prostate gland. I do not see how he can do it, although he is very skilful and, if mine had to be taken out or worked on in that way I would get him to do it; but I do not believe, as skilful as Dr. Davis is, he can get out every bit of the prostate tissue. Further, about fifteen or twenty per cent of prostates become malignant, and he is leaving a potential source of trouble there for malignancy and is leaving, I believe, a possibility of recurrence there.

Dr. Hugh Wyman, Columbia: My good friend Dr. Davis has quite an inventive mind. He is to be commended for his inventive genius. He has perfected an instrument that fulfills a certain field. We all know what the mortality used to be in prostatic work; we all know what a great work Dr. Young of Baltimore has done in this field during his life. We all know that of paramount importance is the preliminary preparation for a prostatectomy by drainage, getting rid of the residual urine, improving the kidney function, bringing the patient up from a poor surgical risk to a reasonable or good surgical risk. Punch operations have been done for a number of years, and as I see it I would classify Dr. Davis' procedure as a punch operation. The punch has been perfected by various men. I think Dr. Davis' instrument and his method have a field, but the field is limited.

In doing prostatic work, the prostate may be enucleated suprapubically, or the prostate may be taken out perineally. About eighty per cent of the men in this country are doing the operation by the suprapubic route, because they feel that method is safer in their hands than the more complicated method of the perineal route. Certainly it seems to me when a prostatic resection is done, when the patient is carefully prepared and becomes a good surgical risk and the gland in its entirety in its capsule is removed, the patient is cured and remains cured for the remainder of his life. I am speaking more now of the benign hypertrophies of the prostate that involve the lateral lobe as well as the median. Where there is a hopeless malignancy and you wish to relieve the obstruction temporarily, the punch method is of benefit. These patients could be drained satisfactorily, however, by a suprapubic cystotomy.

As I say, I do not wish to belittle Dr. Davis' work.

Dr. L. P. Thackston, Orangeburg: This is a subject in which all urologists are interested. We are all trying in different ways to perfect our technic both as to the method we use and from the point of hospitalization. I believe my viewpoint is just a little different from that of any of Dr. Davis' previous discussers and of himself. I personally have had some experience with the cautery punch; I use that for moderate median lobes and small lateral lobes. These cases I prepare just as I do my other prostate cases. I have not used Dr. Davis' modification of Dr. Stern's instrument, but I had the pleasure of using Dr. Stern's instrument some time ago. The cautery punch will certainly relieve median bars and small lateral lobes; I do not see, however, how it could remove the large adenomata. Whatever procedure we take up, certainly we should stabilize our patient's condition; that is, we should see about our patient's blood chemistry, his blood pressure should be stabilized, and his condition brought up to the maximum.

In my hands, other than the few cases I have spoken of, the special cases, I use the two-stage suprapubic prostatectomy. I do it for two reasons; I feel it is much safer and feel it is an easier procedure. It is easier because if you do a two-stage prostatectomy the second stage will not trouble you with hemorrhage. You will find the prostate has gone down decidedly since the first stage of the operation, and you are able to enucleate the gland, practically as easily. The safety of this operation is almost universally acknowledged.

Dr. Davis has shown wonderful ingenuity. I think we should all try to stimulate him in his work, and I hope, personally, he may find other methods in the prosecution of his work and in the devising of new instruments for these large cases. I personally do not think that with his instrument I could relieve the large cases at present.

Dr. Thomas Brockman, Greer: The old saying that a prophet is not without honor save among

his own people seems to be true here. I do feel that this society is to be congratulated in that we have a man who is doing such wonderful work as Dr. Davis is doing with this prostatic operation. I know nothing of the surgical procedure and have had, of course, no experience in dealing with the prostate; I merely am going to give you a few instances of what appealed to me or impressed me with, as I would call it, the removal of all dread or some of the dread of old age for all of us. I have seen some six of Dr. Davis' patients, and I wish to relate this story about the first. This man was eighty-two years old, in fine condition for a man of that age. About five days after he had had this operation he came to me with a small thrombotic pile. In removing this small pile or tumor I gave him much more discomfort, he told me, than Dr. Davis had given him in removing his prostate gland. I have seen five others that gave a story of having gone there and spent two or three days or four or five days there in the hospital, or in the hotel, if they were able to go to his office. I think that is something that deserves our respect. If we men can in our old age have this prostate gland done something to, even if it comes back within a year or two, I will say that thing is worth while. Whenever you begin to talk about removing prostate glands, I know enough about that thing to know I am going to dread it if it is going to be done on me; and I realize that it is being done surgically safely in a great many instances. I do not know what the mortality rate is, but the story that these patients have told me has so impressed me with the minor discomfort of this procedure that I just wanted to tell you members of this society that phase of the matter, which Dr. Davis was too modest to tell us about.

Dr. Hugh Smith, Greenville: I have had the pleasure, and apparently no one else who has discussed this paper has, of seeing this operation done. I know nothing as a clinician about the proper selection of the cases. I do know this; that in the office, after the proper preparation, these patients (many of whom are not good surgical risks) have been put on the table, and with this instrument which Dr. Davis has shown you he was able to take out a great deal of prostatic tissue through the cystoscope— what Dr. Davis called a resectoscope. I have seen prostates that to my inexperienced eyes seemed to almost completely obstruct the vesical orifice and then have seen him take out tissue until, when I looked in again, it seemed as if you could drop a tennis ball in there. I know he is getting more satisfactory results than anything else I have seen done heretofore. It does not compare, if I understand, with the punch operation at all, either in theory or practice. It is a different type of instrument. The cutting current will, with this loop of his, go right through the prostate and bring out tissue, and he can bring out any amount of tissue he wants. He has done, I understand, 123 cases without mortality. Those cases that I have seen were walking around within a week and were voiding comfortably.

Dr. Davis, closing the discussion: As to the punch operation versus the resectoscope, in the punch operation you put a tube in there and feel around until you think you are near the orifice and bring out a hunk of tissue. You can not see what you are doing. Even so experienced an operator as Caulk does not see what he is doing; he saw what was in the fenestrum, but if he should happen to let his instrument slip he is bringing out something entirely foreign to his purpose.

I hospitalize all my patients now anywhere from three to five days. I do not send them back home because I have had two or three of them disobey my instructions when I would tell them to go home and stay there.

The mortality in prostatectomy, of course, has been reduced. Young's mortality is between three and four per cent. I think everyone will agree with me that Dr. Young is the most skilfull operator in the United States in prostatic work. I have been getting some statistics; I got them from one hospital in my town, in which four prostatectomies were done in the last three years, with one death, which is a mortality of twenty-five per cent.

As to saying that I do not remove the entire gland, I say that Young and everybody else admits that the prostate gland will recur after apparently complete removal. I have operated on four cases that had had a prostatectomy within five years. Someone may have overlooked a lobe. I found it had recurred. Even with a prostatectomy you do not always have the success that the urologist and the surgeon tell the patient they are going to have, because they have trouble even after a prostatectomy has been performed.

In these prostatic resections that we do we have the tissue examined microscopically for malignancy. If there is any suspicion of malignancy I use radium implants around that gland. If the malignancy is superficial, it can be felt with the finger, so I do not think I am overlooking any of that. If it is an adenoma, it occurs with much more frequency in the prostate gland than in any other part of the body, because one-third of all men past middle life have enlargement of the prostate. Certainly adenoma does not occur in any other gland in the body with such frequency. Young says in his book it is a hyperplasia and not an adenoma. Certainly an adenoma is not going to shrink in size simply by drainage of that bladder. I sent Dr. Bloodgood a specimen of tissue, and he wrote back and asked if someone could

have gotten a kidney specimen mixed up with it, because it looked like hypernephroma of the kidney. Finally he wrote and said it was an adenoma of the prostate. But certainly it is not such a common condition if a man of Dr. Bloodgood's wide experience did not recognize it.

I thank the gentlemen for their discussion of my paper.

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*SODIUM ISOAMYLETHYL BARBITURATE AS A GENERAL ANAESTHETIC

By Barnie R. Baker, M.D., Charleston, S. C.

In a search for an ideal general anaesthesia an attempt would be made to avoid certain of the objectionable features of the ones in common use today. Chloroform is regarded as too toxic to the patient and having too small a margin of safety. The after effects and the irritation to the pulmonary tubes are objectionable features to Ether. Nitrous Oxide produces inadequate relaxation for general surgery. Ethylene with its great explosive hazard offers little more than nitrous oxide. Spinal Anaesthesia is often accompanied by nausea and is used by many surgeons only for pelvic operations, and those upon the lower extremities. Enthusiastic reports on the Sodium Salt of Isoalylethyl Barbiturate have prompted the trial of the Anaesthetic properties of this drug by us.

Sodium Isoalylethyl Barbiturate (Sodium Amytal) chemically is one of the derivatives of Barbiturate Acid, which for a long time has been known to produce analgesia and Anaesthesia when injected or given orally to animals. This drug is in the form of a white powder which is readily soluble in water and is very bitter to taste. The giving of Sodium Amytal to man was first reported last February by Drs. Zerfas and McCallum of the Indianapolis City Hospital. Although Amytal is not on the general market for use many cases are being reported from various localities.

We have adopted for pre-operative preparation of the patient those drugs which were noted to have been used at Mayo Clinic six months ago. Chlorotone grains 10 is given orally the evening preceding the operation. This is repeated three hours before operation. Morphine grains 1/6 and Atropine grains 1/150 is given half an hour before operation. It has been noted that the effects of this amount of Chlorotone have been more to produce a certain degree of numbness to the tissues than to cause drowsiness. It is very slow to be absorbed and therefore should be given the several hours preceding operation. Chlorotone appears to have little to do with post-operative awakening or reaction.

The administration of Amytal is indeed spectacular. Witness a patient receiving an intravenous injection, by the syringe method, and observe them quietly pass into sleep without excitement, depression, nausea or any sensation of suffocation, and a favorable impression of this anaesthetic will be formed. The syringe contents have been prepared by dissolving each fifteen grains of Sodium Amytal in ten cubic centimeters of sterile distilled water. The Amytal and water are furnished by the manufacturers in companion ampules. The rate of injection is to be no more rapid than one cubic centimeter per minute.

The idea in our work has been to obtain in each case a surgical anaesthesia solely by the use of Amytal and without supplementary anaesthetics. Thirty grains of Amytal are dissolved and placed into a twenty cubic centimeter glass syringe wth a twenty-five guage needle attached. The injection is given slowly into the vein at the prescribed rate of one cc. per minute until ten cc. (or fifteen grains of Amytal) have been injected. In most cases the patient is asleep after the first three cc. have entered the vein. As in other drugs, however, the anaesthetic properties of Amytal vary slightly in depth with different individuals. When fifteen grains have been injected the patient is ready for the test of surgical analgesia. While the needle is still in the vein we may employ one of two tests. (1) Allow the operator to make a small skin incision and watch for any minute muscular reaction. (2) Pinch the skin of the upper arm on the under surface and look for any movement of the hand or fingers. This can be done on the same arm as used for the injection. The reaction which might result will be so mild as to leave the technique unbroken. We have learned for several obvious reasons to prefer the use of test number 2. If

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the test for surgical anaesthesia be passed the operator may go through with his work and experience a new and more complete degree of abdominal relaxation than is usual. If the test shows that the anaesthesia is insufficient, so much more of the drug is given as is necessary to blot out this muscular response. It has been found in most cases 15 grains is the correct dose, while in a few instances 22 to 25 grains are required. The advantage of this method seems to be that each patient determines his own dosage. It appears that other factors besides weight and age must be considered. During injection there is a slight drop in the systolic blood pressure with a tendency to rapidly return to normal. No blood chemistry changes have been noted.

Prolonged sleep follows the administration of Amytal. A few cases have been awaked in three hours, but the majority, rest from six to fifteen hours. The awakening is slow and sometimes accompanied by the rolling from side to side in the bed, or quietly throwing the arms about. There is no noise or fight or excitement to the degree such as witnessed in an anaesthetic excitement stage. Post-operative nausea is practically absent. We have attempted to shorten the prolonged delay in return to consciousness by the use of the following: (1) Injections of Caffein Sodium Benzoate every three hours. (2) The giving of massive amounts of normal saline solution by rectum and under the skin. (3) Large amounts of coffee by rectum. (4) Oxygen inhilations. (5) The giving of various drugs for respiratory stimulation. These were of as much help as the "rich friend" in the time honored story from Sir William Osler. After using Amytal in 14% of the Surgery at Baker Sanatorium and covering a period of six months we have concluded that the advantages of this drug are,—(1) The patient can go to sleep in the room and be relieved of the pre-anaesthetic dread, mental stress and excitement. (2) The drug is easy to give. (3) The relaxation is very good. (4) The operation over we have a quiet surgical abdomen over a period of hours. (5) There is almost complete absence of nausea. (6) Minor temporary blood pressure changes. (7) The drug is non-explosive.

On the other hand there are certain disadvantages. (1) The lethal dose for man is not known. (2) The drug should not be used in extreme shock, uremic coma, in children or the aged, or in cases of respiratory obstruction. (3) Once given the resulting sleep is not controllable. (4) Prolonged sleep is not desired in certain cases such as in Thyroidectomies where a test for hemorrhage or injury to laryngel nerves is desired. (5) There is a high percentage of post-operative catheterizations. (6) Certain reported cases of pulmonary edema have followed this anaesthetic.

Whether the advantages outweigh the disadvantages we feel must be decided in each case. No doubt in certain types of cases and in certain individuals Sodium Amytal is a great help, however we feel that its use as a routine is hardly yet advisable.

DISCUSSIONS

Dr. Douglas Jennings, Bennettsville: I am delighted to see this moving picture by Dr. Baker, and I really thing he should move to Hollywood. I am sorry that Dr. Black could not be here to discuss this, because he has had experience with sodium amytal as a general anesthetic. I have had none, and my remarks are based purely on an article which I happened to see yesterday or the the day before in this month's SURGERY, GYNECOLOGY, AND OBSTETRICS, in which Mason and Baker reported 116 cases in which sodium amytal was used. In only four of these cases was sufficient anesthesia secured for a laparatomy. From that, these men concluded that this drug is not sufficient in itself as a general anesthetic, but they recommend it as a preliminary anesthesia for subarachnoid block or spinal anesthesia. These men claimed it gives an ideal freedom from the dread of the operation, freedom from the excitement of going to the operating room, freedom from psychic shock; and when used preliminarily to spinal anesthesia instead of morphin and scopolamin it is ideal.

I enjoyed Dr. Baker's pictures very much.

Dr. John F. Townsend, Charleston: We have had some cases in which we found sodium amytal quite valuable. We do most of our work with a local anesthesia; we find a general anesthetic very disadvantageous, but sometimes we run upon a case that simply can not be done under local anesthetic with a ten per cent or any other per cent of cocain. Anyway, some months ago I opened a maxillary antrum thoroughly with sodium amytal and found it very satisfactory. The patient had no fear or discomfort from the operation and slept a long time afterwards. I do not know, of

course, how it would work in a large percentage of nose cases, but certainly if I run up on a case like that again I shall use it. We could not put a plug of cotton saturated with cocain in her nose without her raising sand. The idea is that we do find certain cases that we can not do nose operations on under local anesthesia, and then sodium amytal is very valuable.

Dr. Olin B. Chamberlain, Charleston: I am not familiar with the use of sodium amytal in operative work, but I have used it a reasonable number of times in neurological cases.

Status epilepticus, as you all know, is rather difficult to control at times, but for the past several months in Roper Hospital we have used sodium amytal routinely when a case comes in. It does control the convulsions better and more quickly than anything else I have ever used. Three or four minutes after the use of it, employing half the surgical dose, the patient is sleeping quietly, and he will sleep a considerable length of time. Of course, in a few cases when the effect is over the convulsions will start again, but with dehydration according to Temple Foy's method, when sodium amytal is finished, the dehydration accomplishes its results.

We used it in one case of tetanus; and, while the case died, it died with considerable more relief than most cases of tetanus; the spasms were considerably lessened.

Sodium amytal is an effective sedative which can be very quickly used in acute conditions.

Dr. Milton Weinberg, Sumter: I think the last word in anesthesia has not yet been said. To some extent I agree with Dr. Guerry. We have a number of anesthetics: chloroform, with a very limited field of usefulness; ether, nitrous oxide gas, ethylene, spinal, regional block and nerve blocking of various kinds, and several others. Those that I have mentioned I think have a very definite field of usefulness, and I do not like to see any surgeon so enthusiastic over any one anesthetic that he uses it to the exclusion of the others. We have not yet gotten an ideal anesthetic. The safest of all, I believe, is regional blocking in its various forms; and even that is subject to criticism in that some people are very susceptible to novocain and similar preparations, neocain and procain. Some people are so susceptible that we sometimes get a fatality from the mere injection of novocain into the gum to extract a tooth. To be a good surgeon a man must know all the anesthetics and know when to use them. Personally, I am glad to see that we are getting away from ether. I do think some people are over-zealous over spinal anesthesia. Some give it routinely and report no deaths. I do not question their good faith, but I do doubt whether a man can give spinal anesthesia in thousands of cases without getting a fatality. First, I think the toxic effect of the novocain introduced may produce a fatality; and personally I can not see how any anesthetic that paralyzes all the vital organs and produces drop of blood pressure and loss of pulse, the patients assuming a cadaverous appearance in some extreme cases, could be used in thousands of cases, as some have reported, and not cause a death. I believe sometimes death was due to that and was ascribed (I do not say dishonestly) to some other cause.

Dr. George H. Bunch, Columbia: This discussion seems to have become one on the general question of anesthesia. I quite agree with most that has been said. I have had no experience with sodium amytal and know nothing about it. I quite agree with Dr. Guerry as to the virtue of ether and as to its primary mortality; I quite disagree with him as to the indirect and permanent injury that is done the patient by pulmonary involvement and kidney complication that follow the giving of ether.

As to spinal anesthesia, Dr. Weinberg speaks of patients in whom it is used as being cadaveric while on the table and being pulseless. Since the discovery of ephedrin that is given as a routine in our cases before the spinal anesthesia is given, and we get no fall in blood pressure whatsoever; if one takes blood pressure one finds its unvarying during the progress of a routine laparotomy. So far as our experience goes, there are no complications; and the nausea that occurs after it is from the primary narcosis itself and not from the anesthetic. So far as my experience goes, we get less mortality in the poor risks and less morbidity. I think, of course, you have to master the technic, but I think its use is to the advantage of ourselves and of our patients.

Dr. Roger G. Doughty, Columbia: I once had a dog that would go out and get all the dogs in the neighborhood around him and start a fight and then back out and watch it. I think when one starts a discussion of an anesthetic one always starts a "fight."

Recently we have used some avertin in Columbia. It is a drug somewhat like amytal in its effect but given by rectum. It has to be given under temperature control and dosage by weight. It is not intended to be a true anesthetic; it has much the same role as a former discusser outlined for sodium amytal—namely, preparation for some other anesthetic, ether, ethylene, or whatever might be used. In a few cases that we have had it has worker very nicely; the patients are relieved of all pre-operative anxiety; they do not remember anything about the operative work or about the day of the operation. Avertin is given as an enema, and the patient goes into a natural sleep from which he can be readily aroused to answer questions, etc., but he does not remember

anything. It produces a moderate drop in blood pressure, as amytal does.

As to spinal anesthesia, I have had several patients in whom there was definite drop of blood pressure; and in one case the patient had a post-operative neuritis that I feared was going to be permanent. Consequently I can not feel that ether is to be displaced entirely by any of these methods.

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*CHILDHOOD TUBERCULOSIS

By Dr. Ernest Cooper, M.D., South Carolina Sanatorium, State Park, S. C.

As in other fields so in Medicine it is difficult for Truth to overtake Error. From the time of Hippocrates to our own twentieth century there have been those who believe that tuberculosis is hereditary. The Father of Medicine, himself, said "The consumptive is born a consumptive," and the more than fifteen intervening centuries have not sufficed to dispel the ancient error. Time-honored and hoary with age, belief in it still exists among the laity. It is a duty of the physician to inform his clientele and the public concerning the infectiousness of tuberculosis—that it is a family disease—a contact disease—a preventable malady—but not hereditary as a general rule.

There is, however, proof that infection with the tubercle bacillus happens, but very rarely, in the unborn child. Fewer than 200 proven instances of such an occurrence are found in medical literature. Experimentally, only slight evidence has been adduced supporting the existence of tuberculosis in the unborn. There is no proof of the paternal transmission of tuberculosis to the unborn child. Maternal transmission is found only when the placenta fails to maintain its integrity. Consequently, in actively tuberculous women pregnancy should be discouraged.

Since practically all children are born free of tuberculous infection, the physician should advise and instruct against their exposure to the tubercle bacillus. Contact, direct or indirect, with a tuberculous animal or person is necessary to determine infection. We have heard much of the typhoid, the diphtheria and the meningococcus carriers, but their number is only a corporal's guard in comparison with the great army of tubercle bacillus carriers—who enter our homes, travel our streets, frequent stores and other public places, spreading infection wherever their cough is heard and the disease-carrying sputum is sprayed. As the tuberculin testing of cattle increases, the danger of infection through milk decreases. In a few more years this source of infection will be eliminated as the pasteurization becomes universal.

The more intimate and more prolonged the contact between the child and the tuberculous the greater the likelihood of infection and the heavier the infection; the younger the child, the more serious the risk. Transient exposures to the tuberculous may result tragically and every precaution should be taken to prevent contact exposure of any kind.

The oral and nasal cavities—the digestive and respiratory tracts are the chief portals of entry in children for the tubercle bacillus. Hence the importance of keeping children off floors, pavements, streets, etc., that are bacilli-laden, due to promiscuous spitting. Clean hands as well as clean food,—the avoidance of coughers, sneezers, spitters and those who have the kissing habit— will lessen the chances of infection.

A few children escape infection although tubercle bacilli secure entrance to the body. All bacilli admitted do not find lodgement, do not invade the tissues. With repeated exposure to infection, increasing numbers of children become infected. For a time of varying length after invasion there is no apparent or detectible change or reaction on the part of the tissues. It is called the ante-allergic or pre-allergic time. During this period we have no method of determining infection. It may be as short as a few days or continue for eight weeks. After the invasion of tubercle bacilli, the resisting forces of the body become active—and allergy or hypersensitiveness appears— and with it, reaction to tuberculin.

In many we never find any other evidence of infection. The invading bacilli are held in check. Active disease never becomes manifest —clinically—the child remains well. It was formerly thought that tuberculous infection of a young child meant early death. Repeated, prolonged exposures to infection increase the

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incidence of clinical disease, even to 100% of those so exposed.

We have several tuberculin tests—the opthalmic, the Moro or percutaneous, the Pirquet, cutaneous or dermal; and the Mantoux, intracutaneous or intradermal. The latter is the method of choice on account of its greater accuracy. The technique is simple: After cleansing the skin with alcohol—1/100 m. g. of tuberculin is injected into the superficial layers of the skin.

	Old Tuberculin		Nor. Salt Sol.
Sol. A	0.1 cc.	plus	9.9 cc.
Sol. B	0.1 cc. of A	plus	0.9 cc.
Sol. C	0.1 cc. of B	plus	0.9 cc.

1/10 cc Sol. A—1.0 mg. of tuberculin—3rd test
1/10 cc Sol. B—0.1 mg. of tuberculin—2nd test
1/10 cc Sol. C—0.01mg. of tuberculin—1st test.

Injection of 1/10 cc. of the dilute tuberculin into the skin raises a wheal. If a reaction does not appear within 24 to 96 hours—using the weakest solution (C),—the test with the next stronger solution (B) is repeated. If this proves negative, the strongest solution (A) is used. If there is no reaction to the last, one may conclude that tuberculosis is not present. A positive reaction consists of a definite red swelling varying in diameter from ½ to 1 inch. It may be absent in the presence of severe tuberculosis, after acute febrile diseases such as measles, and in the preallergic period.

We have come to recognize a form of tuberculosis called—Childhood Type Tuberculosis—which means the diffuse or focal lesions in the lungs and adjacent tracheo-bronchial nodes resulting from a first infection of the lungs with the tubercle bacilli.

The chief characteristics of the childhood type are:

1. The initial focus consists of a small nodule surrounded by an area of inflammation. This area of congestion may vary in size—may be large or small—even involving a whole lobe. The initial or primary lesion then may be focal or diffuse.

2. Soon after the primary focus appears the lymph glands draining that area become enlarged. Since there is a strong tendency for Childhood Type Tuberculosis to heal, the area of inflammation and congestion may undergo gradual change—resorption of exudate occur and the lesion disappear. On the other hand the initial lesion may caseate, lime salts be deposited or become surrounded by bone, leaving a dense shadow Gohn's tubercle. This whole process with calcification of tracheobronchial glands may occur in five or six months; on the other hand they may remain caseous for years —and potentially harmful.

The chief diagnostic points in Childhood Type Tuberculosis of infants are:

1. History of exposure to carrier.
2. Definite lesion portrayed in X-ray.
3. Positive reaction to tuberculin.
4. Demonstration of tubercle bacilli.

The following characteristics of the Childhood and Adult Type of tuberculosis have been presented by the National Tuberculosis Association:

Childhood Type

1. Usually occurs in children, rarely in adults.
2. Result of primary infection.
3. May be localized in any part of lung.
4. Tracheo-bronchial lymph nodes always involved.
5. Caseous lesions usually become calcified.
6. Excavation very rare, little tendency to fibrosis.

Adult Type

1. Usually occurs in adults, rarely in children.
2. Result of re-infection.
3. Localization is apical.
4. Tracheo-bronchial lymph nodes not involved by the re-infection.
5. Caseous lesions followed by excavation and fibrosis.

Treatment: Stop exposure to re-infection so as to prevent adult type of tuberculosis. Remove the child or the source. Provide good hygienic conditions—wholesome food. Rest is the main factor when the disease is active. Relieve the cough. Cod liver oil with orange or tomato juice two or three times a day will supply vitamins. Children require diet rich in proteins—milk, cheese, milk-beans, eggs, etc. Heliotherapy in selected cases. Avoid over clothing. Artificial pneumothorax if adult type develops and is unilateral.

CONFUSION OF PELLAGRA WITH SPRUE*

Case Report

Edgar A. Hines, Jr., B.S., M.D.,
Spartanburg, S. C.

Sprue is a chronic, cachectic disease originally confined to tropical countries. It is now, however, occasionally endemic in cooler climates. The first case originating in this country was probably reported by Graham of Savannah, Ga., in 1905. Little attention was given the disease until 1915 when Wood of Wilmington, N. C. in an excellent piece of investigative work proved that sprue was not uncommon in the United States and that it was being mistaken for other conditions. Sprue was vigorously discussed at medical meetings and a few cases reported. In recent years, however, this enthusiasm has abated and there is now little evidence of any general interest in sprue. I do not believe that at the present time we are giving this disease the consideration it should have, especially here in the Southern States where so many unsuspected tropical diseases have been found within the past twenty-five years.

In view of the alarming increase of pellagra during recent months, I feel that it may be well to call attention to the similarity of sprue with pellagra and to report a case which indicates that probably cases of sprue are being overlooked and are being treated as pellagra. The importance of distinguishing between the two lies not so much in avoiding an incorrect diagnosis as in preserving the patients health by the proper treatment which is somewhat different in the two diseases. If some of you have patients with sore mouths, diarrhea and an atypical rash, you had better look at your diagnosis as you may be treating a case of sprue.

There is yet much confusion as regard to the etiology. The work of Ashford on the role of a yeast fungus, the monilia psilosis, as the causative organism seems to have received the major attention in recent years. The investigations of Smith, Rogers, Wood, Kraus, Bastedo and others are confirmatory of Ashford's work. On the other hand, Castallani, VanSteenis, Manson-bahr, Bovaird, Hannibal, Boyd and Warthin feel that no definite causative organism has been proved. The similarity of sprue with pernicious anemia had led to further etiological confusion with claims by some writers that the two diseases are identical and have the same underlying cause. There is no doubt that, whatever the actual causative organism, a dietary unbalance is an important factor in the development of the disease.

Sprue usually occurs in young adults and is most often confined to the better classes of people who eat well and consume quantities of fats and starches; whereas, pellagra, as we well know, is essentially a disease of the poorer classes. Existing evidence seems to indicate that the disease is communicable . Ashford has succeeded in isolating the monilia psilosis from loaves of baked bread and from milk.

The whole subject of sprue is too large to cover in detail, but I wish to outline briefly the symptoms and treatment.

The history of a typical case is that of a series of exacerbations. As will be seen in the case report to be read, the typical symptoms may be divided into four groups, as follows:

Mouth Symptoms: These consist of from mild to severe burning and soreness of the mouth often extending down the esophagus and into the stomach.

Gastric Symptoms: These are mainly evidenced as "heartburn" and gaseous distension.

Intestinal Symptoms: Except for the diarrhea, the patient does not usually complain of any marked abdominal symptoms. The diarrhea, however, is the most characteristic clinical feature of the disease. The stools are unique in that they are very large, of greyish or whitish color and are filled with gas bubbles and froth. Because of their peculiar appearance, they have been termed the "cow-pad stools of sprue." Defecation is not very frequent but it is very exhausting. The diarrhea is of the recurrent type appearing, usually, in the spring and summer. In the majority of cases, the diarrhea is confined to the morning hours and does not disturb the patient later in the day. It should be remembered that the first attack or two or the first few days of an

*Read before the Spartanburg County Medical Society, Spartanburg, S. C., August 25, 1930.

attack may not present the typical sprue stools.

Constitutional Symptoms: These consist of a progressive emaciation and asthenia. The loss of weight may be rapid and as the disease advances it is accompanied by a marked anemia. Particularly important and characteristic is the serious interference with fat absorption which results in a marked loss of permanent body fat.

Physical Findings: In the moderately advanced case, the physical findings consist of evidence of loss of weight, a rather severe anemia, a red and excoriated tongue, a slightly distended and tender abdomen, and a diminution of the size of the liver. The blood picture reveals an anemia which in many cases is very similar to that of pernicious anemia. The color index may be one or more but usually nucleated red cells are not found. Gastric analysis may show either a hyperacidity or an alchorhydria.

Differential Diagnosis of Sprue and Pellagra: The sore mouth, intermittent diarrhea, and loss of weight may readily lead to a confusion of sprue with pellagra. The diarrhea of sprue, however, is characteristic. Uncomplicated pellagra is not accompanied by a severe anemia and certainly never produces a pernicious type such as is seen in sprue. The typical pellagra rash is never seen in sprue, and there are no anal ulcers so often found in pellagra. The involvment of the nervous system is absent in sprue. Finally, the demonstration of the monilia psilosis will make more certain the diagnosis.

Treatment: Many of the patients will improve if fed on a high caloric diet rich in vitamins and proteins and low in carbohydrates and fats. Fresh fruits, particularly strawberries, are said to possess therapeutic value. Hydrochloric acid and pancreatin are often of value in preventing the diarrhea and improving the appetite especially if there is an accompanying achlorhydria. (The use of these drugs in my case was the result of reading an article by Dr. Lambert who had himself been ill with sprue and who was treated so successfully with pancreatin and hydrochloric acid that he was led to remark that "it saved my health and enabled me to continue my work.") Calcium in various forms combined with parathyroid extract may be of value. Recently, liver extract and dessicated stomach have been used with very promising results. (The use of liver in sprue dates back for years. Castellani states that liver soup is an old remedy for this disease in Ceylon.) Autogenous vaccine therapy has given excellent results in the hands of some; with others the results have not been so favorable.

Case Report

The patient is a white, male, age 24. Married. Works in the spinning room of a textile mill at Seneca, S. C. Has not been more than fifty miles from present residence at any time during his life.

Family History: Mother had pellagra several years ago but is now in good health.

Past History: Except for the usual childhood diseases, patient had been well up to three years ago at which time he had had an intermittent sore mouth and diarrhea for several months during the spring. This was repeated in a similar manner the spring and summer of the next year at which time he became so sick that he was unable to work for several months. Several doctors had treated him and each told him that he had pellagra. During the few months just preceding present onset, he had felt unusually well and had gained in weight.

Present Illness: Patient stated that about two weeks ago his mouth began to get sore and that three days ago he began having diarrhea accompanied by nausea and some vomiting. The nausea and vomiting had stopped but the diarrhea had continued and he was now having about ten movements a day. There was no blood or mucus or pus in the stools but they were wattery and rather thin. There was no tenesmus. He felt very weak and had no appetite.

Positive Physical Findings : The patient did not appear acutely ill. Temperature 99. Pulse 90. Blood pressure 100/60. There was a rather marked palor of the skin and a discoloration over forearms and knees which, however, did not appear to be a typical pellagra rash. The abdomen was moderately distended and was slightly tender over the lower half. The tongue was very red with several fissures appearing on the surface.

Laboratory Findings: Urinalysis was negative. An examination of a specimen of stool revealed no amoeba or ova. A blood count was not done at this time.

Progress and Treatment: It was thought that the patient probably had pellagra and he was put on a diet chiefly of eggs and milk. The diarrhea was so distressing that a third of a grain of pantopon was given by mouth at intervals which seemed to give relief. By the end of the week, the diarrhea had stopped; the patient was feeling fine and he was advised as to a proper diet and sent back to work. He was not seen again for a month at which time he appeared at

the office saying that his sore mouth and diarrhea and abdominal pain had returned three days previously and were getting worse. In spite of the fact that he had followed the diet closely, and during the interval had felt much better, he had lost ten pounds. He was now feeling weak and exhausted. He appeared very pale and had a yellowish tint suggestive of pernicious anemia. On further questioning him concerning his diarrhea, he revealed that his stools were not very large, contained much gas bubbles and had a musty odor. He said that this had been the nature of his stools the previous year. Laboratory work at this time was as follows: Blood count: Hemoglobin 45%, R. B. C. 2,459,000. W. B. C. 7,800. Differential: Polys. 52% lymphs. 48%. Poik. and anisocytosis. Three nucleated red cells. Urinalysis: negative. Stool: gross examination showed what appeared to be a typical sprue stool. Microscopic examination revealed yeast cells, but as I had no material for making a differential culture the type of yeast could not be determined.

A diagnosis of sprue was ventured and the patient was put on a low carbohydrate and low fat diet, and was given calcium lactate by mouth and Squibb's Vitavose. The diarrhea stopped but the patient's appetite did not return and he continued to feel weak and unambitious. By April 15, examination showed a further loss of weight of fifteen pounds and a return of the sprue-like diarrhea. Blood count at this time: Hemoglobin 25%. R. B. C. 1,250,000 Anis. and Poik. No. nucleated red cells seen. Color index approximately 1. Wassermann., negative.

The same diet was continued. The Vitavose and Calcium lactate were stopped and the patient given pancreatin gr. x half hour before meals and dilute hydrochloric acid one dram after meals. Improvement was noted at once. His appetite returned, the diarrhea subsided and at the end of two weeks he had gained ten pounds and felt much better. For a few days he was tried on a forced strawberry diet but as this seemed to aggravate his symptoms, it was discontinued. After three weeks he had gained five more pounds, but there was little or no improvement in the blood picture and there had been a slight return of the diarrhea. In addition to the other treatment, he was advised to take from four to six vials of Lilly's Liver Extract daily. Shortly after this I moved from Seneca and did not see the patient again. About the first of July he went to see Dr. Hugh Smith of Greenville, S. C. who agreed with the diagnosis and sent the following laboratory report: Urine, essentially negative. Blood count: Hemoglobin 42%. R. B. C. 2,210,000. W. B. C. 8,000. Differential: Polys. 66%, lymphs. 27% monos. 5%, Trans. 1% Eosin. 1%. Red cells showed variation in size and shape. No nucleated red cells. Color index, approximately 1. Gastric analysis showed absence of hydrochloric acid after 60 minutes. Dr. Smith suggested that he be put on Ventriculin in place of the liver extract and the treatment, otherwise, be continued as previously ordered.

Note: a recent communication from the patient states that he is feeling much better; has gained fifteen pounds and is back at work with no diarrhea. He has continued his diet, but is taking no drugs. He is probably having one of the remissions which he has had at intervals.

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SOCIETY REPORTS

REGULAR MONTHLY MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY HELD IN THE LECTURE HALL, CITY HOSPITAL MONDAY, AUGUST 4th, 1930

The meeting was called to order by the President, Dr. Guess at 8:30 P. M. with about thirty members present. The minutes of the last meeting were read and approved with corrections.

Clinical case reports were then called for by the Chair. Dr. Pollitzer reported a case of cancrum oris followed by death; discussed by Dr. C. O. Bates.

Dr. Grimball reported a case of coeliac disease in a three months old infant boy. The child was breast-fed for a short while. Examination revealed a very large abdomen but no masses; the child was jaundiced and its stools were tremendous, light and frothy with very offensive odor.

Dr. Hugh Smith reported a case of chronic myelogenous leukaemia in a woman thirty years of age. The history of her case indicates sprue but has not yet been confirmed. Discussed by Drs. C. O. Bates and Pollitzer.

Dr. Guess then called on Dr. Corn who presented a paper on Modern Conception of Dermatology and Syphilology. Dr. Corn stated that Epidermophytosis is a very common skin disease and so often the finger nails become involved. He then mentioned that the dermatologist should have in mind a thorough knowledge of bacteriology and mycology. Other interesting discussions of skin diseases were made by Dr. Corn.

In discussing syphilis Dr. Corn stated that our methods of diagnosis and treatment have been revolutionized during the past few years. He also made the interesting statement that one-third of all cerebral hemorrhages and one-fifth of all liver diseases were due to syphilis. Early diagnosis and treatment were stressed as being the only key to successful treatment. Discussed by Drs. C. O. Bates, Mauldin, Wilkinson, W. T. Brockman, Carpenter, and Guess; closed by Dr. Corn. Dr. Corn also demonstrated some very interesting instruments which he recently brought from Europe.

The president then called on Dr. E. A. Hines, the Secretary of the State Medical Association, who made some interesting remarks about the coming meeting of the State Medical Association in Greenville next year; he also reported on the proceedings of a recent meeting of the A.M.A. in Detroit regarding certain economic problems.

The secretary then read a letter from Dr. Lee of the County Tuberculosis Hospital extending to the members of the Society the privileges offered by that institution.

The secretary made a few remarks about the methods followed in the City Health Department regarding the confining of that work to indigent people, in so far as inoculations and vaccinations are concerned.

Dr. Hines gave a very encouraging report of the successful tuberculosis clinic recently held at the State Park, Columbia. There being no further business, the meeting adjourned.

I. S. Barksdale, M.D.,
Secretary.

SPARTANBURG COUNTY MEDICAL SOCIETY MEETING

The regular monthly meeting of the Spartanburg County Medical Society was held Monday, August 25, 1930, at 8 P. M., in the dining room of the General Hospital.

Dr. E. A. Hines, Jr. read an excellent paper on sprue and reported a case. Dr. Hines stressed the similarity of the symptoms of sprue and pellagra. Sprue is caused by a yeast fungus and usually occurs in those eating the wrong kind of food. This paper was discussed by Dr. W. W. Boyd and Dr. J. H. Hunter and the discussion was closed by Dr. Hines.

Dr. S. H. Ross, Jr., reported a case of gangrene of the colon and terminal ileum caused by an unknown bacillus very similar to the dysentery bacillus. At autopsy, the rest of the gastro-intestinal tract appeared normal.

Dr. D. C. Alford reported a case of spastic paralysis of the legs. The X-Ray films of the lumbar region and the pelvis showed that the bone was very dense with areas of rarefaction. X-Ray findings suggested Padgett's disease or secondary carcinoma. X-Ray films of the skull did not show any evidence of Padgett's Disease or other pathology. Bimanual examination on the prostate gland

revealed a hard immovable mass which was very suspicious of carcinoma. This case was discussed by Dr. F. H. Sanders.

The Secretary announced that Dr. J. C. Josey and Dr. E. A. Hines, Jr., had transferred their memberships to the Spartanburg County Medical Society.

Thirty-five members and visitors were present.

The President, Dr. C. W. Bailey, suggest that we have a meeting devoted to a discussion of Medical Economics.

There being no further business, the meeting adjourned.

C. W. Bailey, President.
W. M. Sheridan, Secretary.

SEVENTH DISTRICT MEDICAL ASSOCIATION MEETING AT KINGSTREE, S. C., SEPTEMBER 11, 1930

Invocation by Rev. Cashwell, Kingstree, S. C.

1. "Antepartum Hemorrhage"—By Dr. Lester A. Wilson, Medical College of the State of South Carolina, Charleston, S. C.

2. "A Treatment of Eclampsia," by Dr. E. T. Kelley, Kingstree, S. C.

3. "Neurosis In Internal Medicine"—By Dr. Hal W. Davidson, Emory University School of Medicine, Atlanta, Ga.

4. "Precision Diagnosis"—By Dr. Kenneth M. Lynch, Medical College of the State of South Carolina, Charleston, S. C.

5. "The Invention and Application of Uroselectan"—By Dr. E. P. Alyea, of Duke University School of Medicine, Durham, N. C.

6. "Traumatic Rupture of the Urethra; With Case Reports " (Lantern slides)—By Dr. Milton Weinberg, Sumter, S. C.

7. "Reconstructed Fractures of the Forearm; With Case Reports" (Lantern slides)—By Dr. Charles J. Lemmon, Sumter, S. C.

8. Case Reports.

Dr. W. G. Gamble ---------- President
Kingstree, S. C.
Dr. Carl B. Epps ---------- Secretary-Treasurer
Sumter, S. C.

MEETING CALLED TO ORDER SEPTEMBER 8, 1930 AT 8:30 P. M. BY THE PRESIDENT J. HEYWARD GIBBES

Guest speaker Dr. Harold L. Amoss introduced by the president.

Dr. Amoss' subject was Unusual Complications of Brucellus Infection (Undulant Fever). His talk was illustrated with lantern slides showing the graphic charts of cases. The foci of infection may be in the gastro-intestinal tract—the genito-urinary tract—the gall bladder or other places as was demonstrated by Dr. Amoss. The most successful treatment was brought out by Dr. Leavell at the Johns Hopkins Hospital with the use of methyl blue.

The paper was opened for discussion by Dr. Earnest Cooper who suggested a peculiar odor to the sweat of cases of undulant fever.

Dr. J. Heyward Gibbes emphasized the diagnosis lay in the finding of the organism and not merely the agglutination test.

Dr. Herbert Smith stated the S. C. Board of Health Laboratory had used dilutions too weak to give accurate results—that they had profited by the experience and now their agglutination tests were far more satisfactory.

Discussion closed by Dr. Amoss.

The second paper by Dr. F. M. Routh on Common Sense in Allergy brought out several interesting points. One was to use all tests available, second to relieve patient of contact rather than treat with the sensitive material.

Dr. Richard Allison gave an interesting discussion particularly the various eczemas.

Dr. F. M. Durham read the resolutions which he and Dr. Roderick Macdonald had drawn up regarding the recent untimely death of Dr. Theodore B. Hayne.

The Columbia Medical Society approved the resolution and acted according to the Chairman. The motion placed by Dr. Fouche was seconded and passed.

Forty members present—five visitors present.

Society adjourned at 10:30 P. M.

Respectfully submitted,
William Weston, Jr.
Secretary.

MINUTES

MINUTES HOUSE OF DELEGATES
Continued

Reports of Committees

Committee on Medical Economics. The report of the Committee was read by Dr. Douglas Jennings, Chairman, and was discussed by Drs. James A. Hayne, State Health Officer, Columbia, and D. Herbert Smith, of Pauline. Dr. Hayne moved the adoption of the report wth the omission of the word "direct". Dr. Jennings consented to the withdrawal of this word. On motion of Dr. Hayne, the report was then accepted.

Committee on Scientific Work. Dr. James McLeod reported in the absence of Dr. Hugh Smith, Chairman, that the report was submitted to Secretary Hines and printed in the current issue of the South Carolina Medical Journal. He stated that outstanding guests on this occasion are Drs. William Guerry Morgan, President-Elect of the American Medical Association; E. A. Parks, Johns Hopkins Hospital, Baltimore, Md.; and W. Pinckney Herbert, Asheville, N. C., and announced that the committee had placed the symposium on tuberculosis on the second day of the meeting with the idea of making the program for the second day as strong as the first day and hoping that many members will stay over for it. The report was accepted.

Committee on Medical Education and Hospitals. Dr. F. H. McLeod, Chairman, read the report, which on motion was adopted.

Committee on Public Policy and Legislation. Dr. Thomas A. Pitts, Chairman, read the report of this committee, which on motion was adopted.

Committee on Constitution and By-Laws. The report was presented by Dr. J. H. Cannon, Chairman, who moved its adoption, and was discussed by Drs. J. W. Jervey, Greenville; E. A. Hines, Secretary, and C. R. May, President; again by Dr. Jervey and Dr. Hines; and by Drs. J. H. Cannon, Chairman; T. Taylor, Adams Run; William Weston, Columbia; and George T. Tyler, Greenville. Dr. Tyler offered an amendment providing that the speaker of the House of Delegates be elected for only two years. Dr. Frank Lander, Williamston, moved to table the matter, which motion was seconded by Dr. C. B. Epps, Sumter. The motion to table failed to carry. Dr. Tyler then withdrew his amendment. Dr. W. R. Wallace, Chester, discussed the report and moved that it be adopted in toto with the exception of the provision for a speaker of the House of Delegates. This motion was seconded by Dr. E. E. Herlong, of Rock Hill, and was carried. Dr. Cannon, Chairman, mentioned the necessity of changing the revised by-laws, as adopted, to comply with this amendment. Dr. W. B. Lancaster, Spartanburg, moved to insert the word "president" wherever the word "speaker" appears. This motion was seconded by Dr. James A. Hayne, Columbia, and was carried.

Committee on Necrology. Dr. E. M. Dibble, Chairman, read the names of members deceased during the past year, while the audience stood in silence.

During the past year, it has pleased the Almighty to give his last call to many of our colleagues and friends. We miss them from our councils. We revere their memory. Some were of the younger men who gave promise of great things, others in the fullness of years had done their work and were ready for rest. Let us stand in silent tribute to their memory as their names are read.

Dr. W. B. Cox, Chester, S. C.
Dr. John W. Williams, Honea Path, S. C.
Dr. Chas B. Geiger, Manning, S. C.
Dr. D. E. Connor, Taylors, S. C.
Dr. C. A. Rush, Hampton, S. C.
Dr. W. D. Ferguson, Laurens, S. C.
Dr. W. G. Houseal, Newberry, S. C.
Dr. W. E. Lake, Newberry, S. C.
Dr. R. L. Mayes, Newberry, S. C.
Dr. G. deFoix Wilson, Spartanburg, S. C.
Dr. R. W. Sease, Kingstree, S. C.
Dr. D. K. Briggs, Blackville, S. C.
Dr. D. J. Hydrick, Orangeburg, S. C.
Dr. J. E. Warnock, Allendale, S. C.
Dr. C. S. Evans, Clio, S. C.
Dr. C. C. Wyche, Prosperity, S. C.

Committee on Public Health and Instruction. The report was presented by Dr. George T. Tyler, Chairman, and was discussed by Dr. Rolfe Hughes, Laurens. Dr. Frank Lander moved to accept the report, which motion was seconded by Dr. J. S. Rhame, Charleston, and was carried.

Report of State Board of Health

The report of Dr. Robert Wilson, Chairman, was read by Dr. James A. Hayne, and on motion was received as information.

Report of State Board of Medical Examiners

Dr. A. Earle Boozer, Columbia, Secretary, read the report, which was accepted.

Report of Delegate to American Medical Association

Dr. J. H. Cannon, Charleston, read his report as Delegate to the American Medical Association, which was approved.

New Business

Dr. C. B. Earle, Greenville, stated that a former president of the Association, Dr. Charles W. Kollock, is ill at his home in Charleston, and moved to send a telegram expressing sympathy and hopes for his early recovery. This motion received several seconds and was unanimously carried. Dr. Frank Lander, in seconding the motion, thanked the House for sending a similar message to him a year ago.

Dr. E. A. Hines, Secretary, read a letter from Dr. Baxter Haynes, of Spartanburg, now at Chick-Springs Hotel-Sanitarium. On motion of Dr. W. B. Lancaster, Spartanburg, the House voted to send a telegram of sympathy to Dr. Haynes.

Secretary Hines read a letter from the Executive Committee of the Woman's Auxiliary to the South Carolina Medical Association with reference to the postponement of the 1930 meeting of the Auxiliary. Dr. Hines stated that this matter had been brought up when the Committee on Arrangements met in Florence in November, that it appeared then impracticable to hold a joint meeting of the Association and the Auxiliary because of the failure to erect a new hotel in Florence, and and that the Secretary had had some communication with Mrs. Waller H. Nardin, President, and had expressed his regrets. On motion of Dr. F. H. McLeod, the Secretary was instructed to communicate with the ladies of the executive committee and express the regret of the Association and particularly of the local medical profession and ask them to meet in Florence at some later date and to tell the committee that the Auxiliary is still regarded as an official body.

The President announced that thirty new members had been added to the Association during the year.

Dr. James A. Hayne, State Health Officer, said that it had been suggested in the South Carolina Public Association that the annual meeting be held on Wednesday of the week during which the State Medical Association meets instead of on Tuesday, as at present, and asked if such a change would be satisfactory to the Medical Association. Secretary Hines expressed the opinion that it would be all right.

Dr. G. T. Tyler, Jr., Greenville, chairman of a committee appointed by the State Tuberculosis Association to present recommendations to the State Medical Association as to clinics, presented the following report, which on motion of Dr. James A. Hayne, seconded by Dr. Frank Lander, was indorsed:

Recommendations from Committee of State Tuberculosis Ass'n. to S. C. Medical Society in Regard to Holding of Clinics at College Park Sanitorium for the Physicians of the State.

Because of the excellent clinical material at College Park Sanitarium, Columbia, the S. C. Tuberculosis Ass'n. appointed a committee to bring to the attention of the State Medical Society the question of conducting clinics for the physicians of the State. The committee suggests:

(1) That this body decide whether these clinics are desired.

(2) If they are desired, what month would be most convenient.

It is proposed to conduct a three-day clinic, having visiting physicians present and discuss the cases. If the plan is approved, the State Medical Journal will give notice of the dates and of the physicians taking part in the clinics.

Respectfully submitted,
F. H. McLeod,
R. M. Pollitzer,
G. T. Tyler, Jr., Chairman.

Secretary Hines read a letter from Dr. Henry L. Scarborough, Horry County Medical Society, and a letter and telegram from H. B. Springs, V.-Pres., Myrtle Beach Investment Company, inviting the Association to meet at Myrtle Beach in 1931. Dr. J. Heyward Gibbes, Columbia, in behalf of the Columbia Medical Society, extended an invitation to meet in Columbia next year; and Dr. George R. Wilkinson, Greenville, invited the Association to hold its 1931 meeting in Greenville. A vote was taken, and Greenville was decided upon as the place of the next meeting.

Dr. J. Sumter Rhame, chairman of the delegation from the Medical Society of South Carolina, Charleston, offered a resolution requesting the Committee on Public Policy and Legislation to have introduced in the legislature a bill allowing the hospitals of the state the right to hold autopsies on such charity patients in those institutions who may die, where the cause of death is uncertain or of scientific interest. The resolution was adopted.

Election of Officers

Dr. F. H. McLeod nominated Dr. Kenneth M. Lynch, of Charleston, as President. Seconded by Dr. J. Heyward Gibbes, Columbia. On motion of Dr. Frank Lander, the nominations were closed; and on motion of Dr. Thomas A. Pitts the Secretary cast a unanimous ballot for Dr. Lynch.

Dr. D. L. Maguire, Charleston, nominated as President-Elect Dr. Charles A. Mobley, Orangeburg. Seconded by Dr. Vance W. Brabham, Orangeburg. On motion of Dr. J. Sumter Rhame the nominations were closed and the Secretary cast the unanimous vote for Dr. Mobley.

Dr. W. B. Lancaster, Spartanburg, nominated Dr. E. A. Hines as Secretary-Treasurer, to suc-

ceed himself. On motion the nominations were closed and Dr. James A. Hayne cast the unanimous vote of the Association for Dr. Hines.

The following Councilors were elected:

Second District ---------- Dr. S. E. Harmon
Fourth District ---------- Dr. R. C. Bruce
Sixth District ---------- Dr. M. R. Mobley
Eighth District ---------- Dr. G. M. Truluck

The following were elected as members of the Board of Medical Examiners:

Second District -- Dr. J. S. Matthews, Denmark
Fourth District--Dr. Geo. R. Wilkinson, Spartanburg.

Installation of Officers

The newly elected President and President-Elect were escorted to the front by committees appointed by President May. (Calls of "Speech.")

Dr. Kenneth M. Lynch, President: Mr. President, and members of the South Carolina Medical Association: You have made this a personal occasion, and I hope you will realize some of the difficulty under which I appear in the light which you have cast upon me. It seems that I remember out of a rather dim past the statement that "All Gaul is divided in three parts," and that is about all that I do remember about the circumstances of that statement. I may say, however, that life itself is divided into three parts—the past, the present, and the future. Standing in the present we can look two ways into the past and into the future. There are, among the many things which I may regret having done in the past, a few which I am glad that I did. One of them is that I came to South Carolina. (Applause.) In coming to South Carolina I have gained the friendship of members of an incomparable profession, a profession which has had and will always have a very virile interest in medical accomplishment and in that fundamental—medical education. I assume that the present occasion is an example of the interest which this Association has in medical education; I choose to so consider it. In this fundamental in medicine I pledge to you my future undivided interest, and I charge you at the same time that you continue the activity and interest which I have taken occasion a number of times to advertise—the interest which this profession has shown, I believe, beyond that of any other state medical association, in the fundamental business of medical education. I thank you very much.

Dr. Charles A. Mobley, President-Elect: Mr. President and members of the South Carolina Medical Association and House of Delegates: I wish to thank you for the honor which you have done me, and I assure you that I shall view with interest the way in which Dr. Lynch will conduct his presidency and will try to emulate it and do as well as I can as his successor. I thank you.

There being no further business to come before the House, the meeting then adjourned.

SURGERY

Wm. H. Prioleau, M.D., Charleston, S. C.

THYROGLOSSAL CYSTS AND SINUSES

Tumors of the neck are always interesting both from the standpoint of diagnosis and treatment. When examining them we are apt to make mistakes unless we consider all of the possibilities. This is true especially in regard to congenital abnormalities. For this reason it would be well to review the article of Drs. H. M. Clute and R. C. Cattell on "Thyroglossal Cysts and Sinuses" published in the Annals of Surgery July 1930.

Embryological the thyroid gland descends from a point corresponding to the foramen cecum at the base of the tongue to its position inferior to the larynx. As the hyoid bone develops at the same time or later, its relation to the thyroglossal tract may vary. Normally the thyroglossal duct is obliterated before birth; however if it persists, it manifests itself in several ways, an understanding of which is necessary for the proper treatment.

The rarest anomaly is the failure of the thyroid gland to descend into the neck. In this case it persists at the base of the tongue as a lingual thyroid gland. The authors have reported two such cases.

The most common abnormality is a simple cyst or sinus. A cyst is a result of desquamation and inflammation of the epithelial cells in a closed portion of the thyroglossal tract. These cysts are prone to inflammation and may increase rapidly in size. Thyroglossal sinuses opening anteriorly are the result of spontaneous rupture or surgical drainage of a cyst.

The authors report fifty-eight cases which have been followed for at least one year after operation. In this series there has been no mortality and no recurrence. The ratio of incidence in females to males was 2.1, whereas in other thyroid diseases it was 7.1. The youngest patient was three years of age and the oldest seventy-two. The average age for the group was thirty-three. In twenty-four patients the abnormality first appeared after the age of twenty-five.

In the group there were forty-one cysts, eighteen sinuses, and one fistula. The size of the cysts varied considerably from tumors barely palpable to one which was six inches in diameter. The contents are generally mucoid, but when infection is present they are purulent and the walls of the cyst are thickened.

Up to the level of the hyoid bone the cavity of the cyst is generally continuous with the structures of the thyroglossal tract. Above this point the tract is less obvious: it may be behind, in front of, or through the substance of the hyoid bone.

The diagnosis of a thyroglossal cyst is based upon its mid-line position, its intimate connection with the hyoid bone and its upward movements on deglutition. Some of the largest cysts are situated to one side or the other. A great many cases are seen only after a spontaneous rupture or a surgical drainage of the cyst with a resulting persistently draining sinus situated in or near the mid-line below the hyoid bone.

The only satisfactory treatment is radical excision of the thyroglossal tract. The mid-portion of the hyoid bone should be removed and above this a block of tissue between the hyoid bone and the foramen cecum. This latter is necessary as above the hyoid bone the thyroglossal tract is difficult to trace, and thus otherwise might not be completely exercised.

Incision alone is to be deprecated unless its purpose is only to give relief to an acute inflammatory process. It invariably leads to a troublesome draining sinus.

THE AMBRUSTER ERGOT SITUATION

Elsewhere in this issue appears a special article relative to the campaign conducted in recent years by one Howard W. Ambruster against the Food and Drug Administration of the United States Department of Agriculture and against the officials of the American Medical Association. In his campaign, Mr. Ambruster has alleged repeatedly that there exists a conspiracy between the government department and the American Medical Association to approve substandard drugs, particularly ergot. As is brought out in the special article referred to, Mr. Ambruster is in the ergot business. At one time he had and, according to current reports, he still has a considerable amount of ergot and of its preparations on his hands. The charges of Mr. Ambruster are entirely without foundation. The vast majority of the ergot on the market is dependable and there has been no increase in deaths from puerperal hemorrhage. The government department attacked seems to have been operating with exceptional efficiency.

As shown in the analysis of the matter published in this issue, a scientific body known as the American Association of Obstetricians, Gynecologists and Abdominal Surgeons injected itself into the situation through the appointment of a special investigative committee. The report of this special committee was circulated by the Ambruster cohorts before it was presented to the society. The report has not received any approval by either the executive body of the society or the society itself. The chairman of the committee is recognized as a personal friend and neighbor of Dr. Henry H. Rusby, chief supporter of Ambruster in this matter. Special attention is called to the report accredited to the American Association of Obstetricians, Gynecologists and Abdomnial Surgeons in order that other special scientific societies without facilities for either scientific or other types of investigation may not be drawn into a similar snare. For many years the American Medical Association has had an independent body, the Council on Pharmacy and Chemistry, charged with the investigation of drugs and with maintaining standards of purity and honesty in their manufacture and exploitation. Even such a body, composed of specialists in many fields and equipped with laboratories and funds, finds it difficult in some instances to ascertain the exact facts. How much less can any committee without these facilities and without special knowledge attempt to prepare a report in this field? Certainly the American Association of Obstetricians, Gynecologists and Abdominal Surgeons now needs a different type of committee to investigate the manner of preparation and particularly of circulation of the report which has been accredited to it and which has already done serious harm to the good name of the organization.

Dr. Henry H. Rusby is seventy-five years old, already retired from his official teaching position. As a botanist he was recognized by the pharmaceutic profession as a leader—in pharmacy, not medicine. The record of Dr. Rusby presented in this special article would seem to be sufficient to convince any careful reader that Dr. Rusby's services have not always been altruistic.

The attacks made by Howard W. Ambruster over several years and now being conducted in correspondence to all the members of the Committee of Revision of the U. S. Pharmacopeia and to any one else that will listen to him represent a type of pertinacity and venom and an assertion of persecution unusual in one who is trained as a chemist, whose mind should be calm and balanced in the judgment of any scientific situation. In his most recent letter to the members of the U. S. Pharmacopeial Revision Committee he concentrates his attack on Dr. E. Fullerton Cook, recently unanimously elected chairman in spite of opposition from those that have sought to break down pharmacopeial standards for the benefit of commercial interests in the field of pharmacy. There is no more warrant for the attacks made on Dr. Cook than for those made on the United States Food and Drug Administration and on the officials of the American Medical Association.

It is a pity that scientific workers should be compelled to pause in their pursuits to evade the buzzing and pestering of the musca Ambruster. It is sad that such persistence and intensity of purpose as he has displayed should not have been placed on some more justifiable cause. It is unfortunate that a government bureau endeavoring not only to maintain high standards but, indeed, to raise them should be compelled to spend weeks of preparation for a Senate hearing and weeks of time in the hearing because of publicity given to the wailing of a commercial interest caught long in a medical market.

Up to now The Journal of The American Medical Association has largely ignored in its pages the nuisance of Mr. Ambruster. It will continue to devote little of its interest or space in the future to unfounded charges, to insinuations without evidence, to the calling of names, or to cacoethes scribendi on the part of any commercial assailant. —Jour. A.M.A., Sept. 6, 1930.

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The Journal

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EDITORIAL

SPARTANBURG HAS REMARKABLE HOSPITAL DEVELOPMENT

We are indebted to the Spartanburg Herald, of September 21, which publishes a fourteen page section devoted to the extensive hospital and health program which has been under way there for several years and is now nearing completion. The total cost of all these splendid achievements approximate one million dollars. This extensive and ambitious scheme is under the direction of the Spartanburg General Hospital of which Dr. J. M. Beeler is the Director. Among the improvements noted are a new clinic building, a new negro hospital, and a new tuberculosis hospital. The Duke and Rosenwald interests together with county appropriations contributed about a quarter of a million dollars. The wide expansion of this County Hospital should encourage many other counties in the State and in the South. In passing we wish to call especial attention to certain features already stressed in the work there. Dr. Beeler is not only the hospital superintendent but is the County Health Officer and in this plan great stress has been placed upon preventive clinics in the domain of childhood particularly. A splendid orthopedic clinic has been developed. The new hospitals will contain ample provision for continuing the care of children when sick. There will be a fine tuberculosis unit for children. The County Hospital, an institution of more than one hundred beds, is only about twelve years old yet it has steadily forged ahead until today it is a model in many respects. The hospital is a Class A institution, accredited by the American Medical Association for the training of internes as well as a safe and scientific refuge for the sick public. All of these wonderful achievements could not have been recorded here had not the medical profession of Spartanburg possessed rare vision and cooperation. With all of these splendid buildings and equipment coupled with one of the most unique health and social service organizations in the South we confidently anticipate a rapid growth and further leader-

ship. It is believed that a great step forward for organized medicine is to be hoped for from such a combination of interests as have been outlined herewith. The Journal congratulates the profession of Spartanburg County and the splendid citizenship there on the consummation of such magnificent plans.

THE ANDERSON SOCIETY INTERPRETS RESOLUTIONS OF HOUSE OF DELEGATES ON ECONOMIC PROBLEMS

Naturally there has arisen some confusion about the action taken at the Florence meeting with reference to the part the County Medical Society is to play in the supervision of public health activities in each county in the state. It was recommended that every county medical society appoint at once a public health committee, this committee being charged with cooperative and supervisory powers with reference to all public health matters in the county. We believe the House of Delegates did not intend to cripple in the slightest degree legitimate public health work but to bring about a closer cooperation on the part of the medical profession with public health agencies. In no other way will the South Carolina Medical Association ever completely fulfill its destiny as proclaimed in the organic public health law of the state to the effect that, the South Carolina Medical Association is the State Board of Health. The intent of this law is to the effect that every member of the State Association is duty bound to take an interest in preventive medicine in his community and in his private practice. The Anderson County Society attempts to provide working rules whereby the resolutions adopted at the Florence meeting may be carried out to meet local conditions. Each county medical society will have to do the same thing as conditions vary greatly. Only about half of our counties have county health units. It is not too much to say that something like a half million of our people do not come under the beneficent scope of these departments. In such counties therefore the problem will be somewhat different. In them, as we see it, the medical profession must necessarily bear a greater responsibility for the public health interests. We urge our members to consider carefully the action taken by the Anderson County Medical Society. In the meantime, the indigent should be given every deserved consideration as has been the case on the part of the medical profession for untold centuries.

DEATHS OF PROMINENT MEDICAL MEN

In recent months, several well known medical men have passed away. Dr. J. C. Bonner died of pneumonia on July 29. Dr. Bonner had been one of the Staff physicians of the State Sanatorium for ten years. He had seen the State institution grow from a few beds to some two hundred beds and to take its place as one of the best tuberculosis hospitals in the South Atlantic States. Dr. Bonner by his long association with the great problem of tuberculosis in South Carolina occupied an authoritative position in regard to this disease. He died comparatively young but left an enviable name for his great devotion to duty and his wide knowledge of tuberculosis. Modestly but efficiently he rendered a distinguished service to his state.

The Anderson profession also loses two splendid physicians, Dr. J. F. Shirley of Honea Path died suddenly on the streets of Anderson in the line of duty, he being on the way with a patient to the County Hospital, when death overtook him suddenly. Dr. Shirley was a genial friend, a good doctor, and will be sorely missed in his community.

In the passing of Dr. R. F. Divver of Anderson, South Carolina loses one of its oldest physicians, about ninety. The doctor had not been in active practice perhaps for twenty years but he had a keen mind and continued to keep up a lively interest in the profession. He was one of the most distinguished Masons in the South and a Confederate Veteran of rare accomplishments. He was a familiar and friendly figure on the streets of his native city, known and loved of all men. In his earlier years he often went out of his way to encourage and inspire the young doctor wherever he found him.

ORIGINAL ARTICLES

*POLYCYSTIC DISEASE OF THE KIDNEYS

By E. E. Herlong, M. D., Rock Hill, S. C.

As you know this disease is characterized by the presence of multiple cysts in the kidney substance. In the great majority of cases, both kidneys are affected. Within the past ten or fifteen years, there have been numerous illustrative contributions in the medical literature, hence we do not regard it now a-days as so much of a curiosity. The literature records that the disease may be met with at all ages of life; and is thought to progress from early life onwards; the progress being a very gradual one. Pathogenesis: the cause of these cysts has not yet been established, but several explanatory hypotheses have been advanced; Virchow, believed that the condition was due to an intra-uterine obstruction of the kidney tubules by uric acid and lime infarcts. Subsequently he considered that it was due to an intra-uterine papalitis produced by the uric acid and lime infarcts, bringing about an atresia and obliteration of the collecting tubules. The most attractive hypothesis, and the one which receives most support is that of Kuster, who attributed the cyst formation to an irregular congenital development of the kidneys. The ureter arises as a tubular diverticulum from the Wolffian duct, and from the ureter are developed the pelvis and collecting tubules of the kidney. The uriniferous secretory tubules, on the other hand are formed in mesoderm, known as the Metanephric cell mass. As the collecting tubules grow out into the developing kidney they acquire connections with the uriniferous tubules. Failure to establish a junction between these tubules would result in the formation of cysts within the uriniferous tubules. The presence of liver cysts and other maldevelopments associated with many of these cases serves to strengthen this view. Also the hereditary history of Polycystic disease in some families. If this view of the congenital development be correct, it is difficult to understand why the disease should be commoner in the middle-aged than in the young, unless one concludes that the cysts remain latent in youth and with the advent of age commence a gradual increase in size, at a time when more stress is thrown on the kidneys, whose power to respond is diminishing. Mckinlay, agreeing with their congenital origin, believes that such cysts may remain quiescent, but that when present in sufficient quantity to stimulate hyperplastic compensatory change in the renal parenchyma the lesion will be a progressive one. A third hypothesis, which has received considerable support, suggests a Neoplastic origin of the cysts, of the nature of a Multilocular cyst-adenoma.

Case Report:—Patient, Mrs. J. W. R., Female, age 37, Married, Mill Employee, admitted to Hospital March 1st, 1930, complaining of pain in right lower quadrant, burning upon urination, headache, and increasing unfitness for work, nocturia three to four times, but no loss of weight. Patient said that she had had a backache for three or four years. Noticed a tumor mass in right side about a year ago, has had bladder tenesmus and frequent urination for the past three or four weeks. Patient has three children living, apparently in good health. Has two children dead, one died at age of two years, with a diarrhea; the other died at age of 8 months with Whooping Cough. Her father died from Brights disease. Her mother died at age of 33 from childbirth. She has a half sister age twenty that suffers from kidney trouble. The patient worked in the mill until about a month ago, when it became necessary for her to discontinue her work, due to the increasing pain in her right side, headache and general malais. She said that she felt much better, when she would stay quiet in bed. Her family physician referred her to the Hospital on the 1st of March for a cystoscopic examination. A bilateral cathertiza-

*Read before the South Carolina Medical Association, Florence, S. C., May 7, 1930.

tion of the ureters was made, the bladder appeared to be normal, except for a trigonitis, the ureteral orifices appeared to be normal. The specimen from the right kidney contained 4 plus pus, a few scattered red blood cells, and a residual of twenty c.c. of urine was aspirated from the right kidney pelvis that was infected. No backing up in the left kidney pelvis, no pus or blood in the left side, Kidney function, 1 c.c. Phenosulphthalein given intravenously, no function at all on the right side at the end of fifteen minutes, 10% on the left side in fifteen minutes, after the appearance time, which was five minutes, Bladder Secretion, 3 plus pus, no red cells, no casts, negative for Sugar, one plus albumen, Patient was then X-rayed, no negative shadows noted, a very large mass was observed on the right side, extending well over the mid-line and down into the pelvis, very little enlargement noted over the left kidney, you could barely palpate the left kidney at this time. Pyelogram revealed the characteristic findings of a polycystic kidney, with much more dilatation of the kidney pelvis and calices on the right side. There was some elongation of the pelvis and calices on the left side, but no dilatation. Due to the findings in this case, and all the symptoms referable to the right side, and a fair function on the left side, we thought best to do a nephrectomy on the right side, Patient stood the operation as well as could be expected, went home after two weeks stay in the hospital, had an uneventful recovery, except that she was more or less nauseated all the time in the hospital, vomited occasionally. Two weeks after she went home she returned to the hospital for observation as per directions. It was noted at this time that the left kidney had increased very markedly in size, and she was having pain in the back and the left quadrant. I cystoscoped her, and irrigated the left kidney pelvis with silver nitrate sol. 1 to 500. There was no pus in the left kidney at this time, no backing up in the kidney pelvis. She went home and was getting along very well, was beginning to do her house work, until April 15th, five weeks following the operation, she suddenly took sick about bed time, had a convulsion, and died on April the 17th. This feature of the case I am very sorry to have to report. However we did not criticise ourselves for having operated upon this particular case, as there was absolutely no function from the right kidney, and it contained a four plus pus, from which she was getting very uncomfortable bladder symptoms, and it was producing much paid, mostly I think from pressure symptoms. The kidney weighed three pounds. Her blood pressure was 130 over 70. She undoubtedly had a latent polycystic kidney on the left side, and why it should have begun to increase following the operation, I am unable to explain.

Etiology: Certain factors common to a number of cases cited in the Literature help to throw some light on this condition. Heredity: It would appear to be unusual to find a family history of Polycystic disease, but there are authentic cases on record. Eisendrath found one family in which 5 members had this disease. Virchow; 4 children of the same family with Polycystic disease of the kidneys. 5 children of another mother; a father, son, and nephew; and a father, son, and sister; with symptoms in other children of the same family. Age: Clinically the disease is met with at two periods of life, in infancy and middle-life. The occurrence in infancy is rare, and it is seldom found between infancy and twenty-one years of age. In the post mortem records of the royal Hospital for sick children, Glasgow, since 1915, out of a total of 1411 cases, there was only one case of Polycystic disease of the Kidney. Ballantyne mentions a case in which delivery of the child at birth was obstructed by a renal tumor of this nature. Sex: It is generally agreed that the condition is met with more frequently in females than in males. Other deformities associated with polycystic disease of the kidneys are, cysts in the liver, hare lip, cleft palate, spina bifida, meningocele, hypospadias, cardiac defects, and occasionally hydrocephalus and horse-shoe kidney.

Symptoms: By some authors three stages of the disease are distinguished, 1st, the latent period; 2nd, when the tumor is present; and 3rd, the uremic stage. The latent period is variously given as from 3 to 10 years. If the congenital theory of the causation be

accepted, the length of the latent period must necessarily be that of the age of the patient at which time the first sign of the disease was established. The first sign usually by which we detect the disease, is the presence of a tumor. However, the first symptom may be hematuria, especially so if the patient is a male. However it is thought by some that the females have the hematuria just the same, but pass it up unnoticed, attributing it to some other cause. A careful investigation into the history will generally furnish some evidence of renal insufficiency prior to the onset of hematuria or the discovery of a tumor; such as headache, nausea, loss of appetite, with increasing unfitness for work, only by the discovery of a tumor about the kidney, is there much likelihood though of a diagnosis being established, a bilateral enlargement of the Kidneys makes the diagnosis practically certain. Kidd in collecting 149 cases from the literature, found that 9 were unilateral, 6 on the left side and 3 on the right. Pain is not a constant feature, only about one half of the cases complain of pain. It is felt in the lumbar region, and is commonly of a dull aching character, seldom sharp or stabbing. Hematuria is seen in about one third of the cases. The hematuria is intermittent, painless and not severe as a rule. Other hemorrhagic symptoms, as petechia or bleeding from the nose and bowel are not uncommon.

Diagnosis: Physical examination may reveal a tumor over which the percussion note is dull. If this is bilateral, congenital cystic kidney should be suspected. Pyonephrosis and perinephritic abscess are unilateral, as is hypernephroma or any other tumor. One may be unable to distinguish whether the kidney or the liver is at fault, and an enlarged gall bladder adds to the confusion. Cystoscopy helps to determine the source of hemorrhage, pus, etc. Pyelography has been very helpful—Braasch states that in more than 50% of the cases, there is a flattening and obliteration of one or more of the major calices or an elongation, rounding and displacement of the pelvis. We get a retraction of the calices in malignant tumors. There is some danger however to be encountered in doing a pyelogram in these cases; we are very apt to set up an infection, or else it might precipitate an attack of uremia. We should at least take precaution, and not do a double pyelogram at the same time.

Treatment: Once the disease is discovered, treatment resolves itself into one of two choices. Either palliative measures must be undertaken, as in any case of chronic nephritis, or surgical measures must be adopted. The patient should lead a very quiet life, should watch his diet and drinks very carefully, and should not expose himself to cold, etc. They should be advised to see their physicians at regular intervals, so that he might keep a check as to the progress of the disease. Nephrectomy might be resorted to in cases of severe hemorrhage where the patient's life is endangered; or a calculus with hydronephrosis; unilateral infection with suppuration, or a Tubercular infection. Apart from nephrectomy, less radical operative proceedings have been carried out, such as puncture of the cyst, Nephrotomy with evacuation of the large cyst. A large form of decapsulation, the capsule is nipped off with scissors, thus opening up the superficial cysts. While such treatment cannot be regarded as curative, it suggests a reasonable procedure for the relief of renal tension, which is manifested by constant aching in the lumbar region and anuria; also in cases where the actual bulk of the kidney may be causing obstructive pressure on the neighboring organs. The general concensus of opinion however, is that the medical treatment is the one of choice. Because they die in most instances within about two years after the disease is recognized.

Conclusions: 1. Females usually predominate about 4 to 3.

2. Majority of the cases have pain in the flank and some of them have renal colic.

3. Most cases have an intermittent hematuria; and it may prove to be very troublesome at times.

4. One kidney is usually very much the larger. More enlargements occur on the left than on the right side.

5. The disease vary rarely occurs unilaterally. Most likely a latent condition on the supposedly normal side.

6. Pyelography is a great aid in the diagnosis of the disease.

7. The treatment in most instances is medical.

8. The majority of the patients die of uremia.

Discussion: See remarks about this Ed.

DISCUSSION

Dr. Norma P. Dunning, Rock Hill:

I enjoyed hearing Dr. Herlong's paper, and I was glad he emphasized the point of hematuria. We have spoken of "essential hematuria." Someone said of that that we should never use it except to our best friends, who will know that we use it because we do not know just what is causing the trouble.

I noticed that the only man who ever suggested the removal of the enlarged kidney was the pediatrician. It is said that this condition becomes more evident as the person grows older, so the pediatrician could hardly advise removal unless he was talking about the indications Dr. Herlong mentioned—infection of the kidney and other points Dr. Herlong brought out.

Dr. Hugh Wyman, Columbia:

I enjoyed Dr. Herlong's paper very much. I want to call your attention to or to emphasize a few facts about polycystic kidney.

It is almost conclusive that polycystic kidney is a congenital malformation. Dr. Herlong stated that most commonly they are bilateral; it is seldom they are unilateral. I have seen a few cases of polycystic kidney. Two cases I discovered accidentally; there were no symptoms except pyuria. I believe one patient had some obscure symptoms, and because of his pyuria he was investigated and a diagnosis of polycystic kidney made. All of my cases have been in adults between twenty and thirty.

One important factor in the diagnosis of polycystic kidney is phthalein elimination. Ordinarily, in investigating the function of the kidneys with phthalein we give the phthalein either intravenously or intramuscularly and recover the phthalein in thirty minutes, after intravenous injection, or in two hours, after intramuscular injection. But in polycystic kidney we recover very little or no phthalein from the bladder. If you catheterize the ureters you may recover the normal phthalein, showing that the dye is excreted but is held in the residual urine in the kidney pelvis.

When the polycystic kidney is unilateral it is extremely difficult to differentiate the diagnosis, especially in the cases that bleed, from malignant disease of the kidney. I heard Dr. Brasch, of the Mayo Clinic, one of the foremost authorities on pyelography, state he had mistaken the diagnosis at times.

In view of the fact that there is a urinary stasis, so to speak poor drainage, frequently we encounter stone formation with polycystic kidney.

I should like to call your attention to a recent discovery of an organic iodin preparation known as Uroselectan. Uroselectan will be released at the New York meeting of the American Urological Society. It is a preparation very much like the gall-bladder dye. It is injected intravenously and radiograms made at intervals of fifteen, forty-five minutes, and an hour. The urinary tract is made opaque. I predict that Uroselectan will bring to light many congenital anomalies and other abnormalities of the urinary tract which we are now overlooking.

Dr. Herlong, closing the discussion:

I have nothing further to say except that I should like to stress the value of pyelograms in making the diagnosis. I think that the majority of polycystic kidneys show very little dilatation of the pelvis and calices, whereas in hydronephrosis and pyenephrosis there is much dilatation of the pelvis and calices.

I know we acted against the rule in operating on this case, but in view of the fact that the pressure was giving so much trouble and that pure pus was aspirated from the right kidney pelvis, which was aggravating the bladder trouble, we thought it advisable to operate. We are very sorry to have to report that the patient died. We thought we were going to get away with it in this particular case but did not.

I wish to thank Dr. Dunning and Dr. Hugh Wyman for their discussion in this case.

THE RESULTS OF A FAULTY DIET

By Hugh Smith, M. D., Greenville, S. C.

An article by Robert McCarrison on faulty foods in relation to gastro-intestinal disorder, appeared 8 years ago in the J. A. M. A. It was the most fascinating piece of work I had ever read. The theme of my talk tonight is along somewhat similar line but more particularly as it applies to our local problem.

McCarrison had been for nine years in remote sections of Himalaya as a member of the Indian medical service. He said "During the period of my association with these peoples, I never saw a case of asthenic dyspepsia, of gastric or duodenal ulcer, or appendicitis, of mucus colitis, or of cancer, although my operating list averaged 400 major operations a year."—"Among these people the 'abdomen over-sensitive' to nerve impressions, to fatigue anxiety or cold was unknown."—"Indeed, their buoyant abdominal health has since my return to the west, provided a remarkable contrast with the dyspeptic and colonic lamentations of our highly civilized communities." Searching for an explanation for this difference he gave four circumstances. "First, infants are reared as nature intended them to be reared—at the breast."

"Second, the people live on the unsophisticated foods of nature; milk, eggs, grains, fruits

and vegetables."
"Third, they are eminently a tectotal race."
"Fourth, their manner of life requires vigorous exercise of their bodies."

McCollum has written about our diet of meat, bread, potato and sugar. He states that this has become a national menace. As our urban population increases at the expense of rural population, it becomes increasingly more of a problem to supply the protective foods in sufficient quantity to meet the needs of a large city. Here in South Carolina, fortunately, our population is still largely rural, and the greater part of our urban population is in intimate touch with the soil and its productivity.

All of us are familiar with the periodic appearance of pellagra. It seems definitely established that these outbreaks are related in a readily demonstrated manner to periods of economic depression. Pellagra is still a moot question, as to whether it is a deficiency disease or an infectious disease. Based upon McCarrison's work, I am of the opinion that it is due to both, that is, a faulty diet deficient in many essential elements, lowers resistance, and disturbs the defensive mechanism of the gastro-intestinal mucosa, thereby increasing its susceptibility to infection. McCollum has never been able to produce pellagra in the laboratory animals by any dietary experiments alone. Seale Harris has noted over a long period of years that he has never seen a case of pellagra in a well seweraged city. He, too believes pellagra due to both factors, that is, food deficiency plus infection.

The problem of dental caries in our public schools has been brought to our attention in recent years by the institution of health examination in many cities. I am informed that 80% of our school children have defective teeth. This is certainly a serious situation and one that demands our active interest. It is not enough to offer corrective measures. We must develop preventive control by instructing potential mothers how to furnish their children with good teeth.

People who do not eat regularly of fresh leafs, fruits, and milk, do not obtain enough calcium. This is quite a common fault in this State. During pregnancy the fetal demand for calcium and phosphorus is quite high. Therefore the pregnant woman should be especially instructed how to meet this demand. The quantity of citrus fruits; fresh leafs, vegetables and milk should be greatly increased and it might be wise to reinforce this diet by the addition of calcium carbonate and cod liver oil. In such a way the child's teeth can be given a good start. Following delivery, by the addition of cod liver oil and fruit juices to the infant's diet and by keeping it outdoors in sunshine for regular periods, she can do more towards corrective dentistry than any number of dental clinics, after the child has reached the school age.

The people of the United States spend over fifty million dollars annually for laxatives. All of us see daily our quota of digestive sufferers, who needs must take laxatives. Constipation is certainly the result of a faulty diet, and is very probably an etiologic factor in the development of colitis, appendicitis, and cholecystitis. Constipation should be prevented in early life by a proper proportion of fruits and vegetables in the diet. Later, it can be overcome by correct diet control and training. We must know enough about foods to instruct our patients and to advise our community sensibly, if we are to serve our profession rightfully.

In overcoming constipation we must visualize the intestinal tract and the behaviour of foods while passing through. In our section the general diet consists of hominy, rice, breads, potatoes, sugar and meat. These foods probably make up the dietary of a large proportion of our patients. They are palatable, of high fuel value and are economic. But they are poorly balanced, disproportionately high in carbohydrates and entirely lacking in certain vitamins, so essential to health. If these foods form the greater part of diet, there is no residue or bulk remaining after digestion. The intestinal tract has a muscular coat and an inherent progressive peristaltic contraction. If not furnished sufficient bulk by feeding fruits and vegetables, which leave a large residue of undigested fiber, the intestinal muscles lose tone and quit work, causing constipation and its sequellæ.

In the United States we are now using about 100 pounds of sugar per person per

year. This from a fuel standpoint supplies about one sixth of our needs. As sugar is a highly refined product, which has no value other than caloric, it is evident that we must stress the needs of sufficient vegetables and fruit.

White flour, polished rice and degerminated corn meal are also modern improvements, which have been so refined by the removal of their cortical and germ portion as to lose their essential elements. Corn flakes, post toasties, grape nuts and the like are put up in very attractive packages and relieve the housekeeper of any burden of preparation. That is their chief function.

For years pernicious anemia was an unsolved problem. We are not certain now that we know its cause, but for the last four years we have been able to control its course and to restore these patients to an apparently normal state of health, by putting them on a general diet of high vitamin content and with large amounts of liver, and sweet bread. I have had no occasion to transfuse a p.a. for over 3 years. On a diet containing all of the vitamins and large amounts of the protective foods and glandular meats, particularly liver, their improvement is often dramatic and within a short period of a few weeks, they are apparently well.

In treating sinus infections, Jervey has found that a high starch diet delays a cure. He puts such cases on a diet sharply restricting sweets and starches. I am sure that his improved results are due to an improved state of resistance on the part of his patients, as a result of an increased intake of fruits and leafy vegetables when deprived of their common starches.

The relationship of endemic goitre to iodine sufficiency is so well known that I only mention it. This relationship has not only been proven between iodine and the goitre of human beings, but also is of great economic importance in certain western districts where animal husbandry is a big business. The annual loss of pigs, sheep and cattle both by miscarriage, still birth, and early death from goitre, is excessive.

Water supplies do not properly fall into this discussion. I mention it only to quote Aristotle in a communication to Alexander the Great, about 300 B. C. "Do not let your men drink water out of stagnant pools. Athenians, city born, know no better. And when you carry water on your desert marches, it should be first boiled to prevent its getting sour." If we had used that knowledge in the Spanish-American war, our losses would have been less than half.

What can we do to improve this situation? It seems to me that a general hospital has an excellent opportunity to teach its patients both by service and by instruction the elements of proper diet. This done regularly would serve a great purpose. Each patient on discharge would then carry to his or her home definite knowledge that would be spread not only to their families but into their communities. If in this manner, we could teach a large number of people annually an appreciation of the role of proteins, fats and carbohydrates, the essential minerals and vitamins, we would soon improve the diet habits throughout the State.

The above suggestion does not lessen the responsibility of the individual physician. I would like to suggest the reading of McCarrison's article, published January 7, 1922 in the J. A. M. A., and a small book on "Diet, Nutrition and Health," by McCollum and Simonds, of Baltimore, which is packed full of practical information on this subject.

We are all familiar with specific deficiency diseases, such as scurvy, beri-beri and rickets. Fortunately, the two former we see very rarely now. What I want to impress is that we are all subject to food deficiencies less marked, but nevertheless causing certain physical impairments, such as lowered resistance to infection, ennervation and a serious impairment of our productive activities, both mental and physical.

Vitamins A, B, C, and D are definitely recognized and their functions understood. More recently a fifth, vitamin E, has been recognized by Evans and Bishop of the University of California. In their laboratory experiments, they are able to control positively, both fertility and sterility in the laboratory animals. This, so far, is not applicable to the human race. The laboratory animal has taught us so many truths however, that I venture the opinion that this

will mark a material step forward in the control of this great problem.

McCollum has advised the daily intake of milk, eggs, fruits and vegetables. He calls them 'protective foods.' McCarrison calls them the 'unsophisticated foods.' Citrus fruits, milk, butter, leafy vegetables and salads should form the basis of our daily menu. After these are furnished the quantity and fuel value can then be made up by cereals, breads, meats and desserts. To quote McCollum again, "Eat what you want after you have eaten what you should."

Encourage your patients who have sufficient room to keep a cow, chickens and tend a vegetable garden. They serve a double purpose, outdoor activity and health building foods.

CORONARY THROMBOSIS SIMULATING SURGICAL ABDOMINAL ACCIDENTS*

By Douglas Jennings, M.D., Bennettsville, S. C.

In a paper, "A Clinical Study of Coronary Occlusion," read before the American Climatological and Clinical Association, Robert Wilson (1) definitely shows that the significance of the sudden occlusion of a coronary vessel, or one of its branches, is only recently appreciated and recognized. To quote from this paper—"only twenty-three years ago Broadbent said that there are no characteristic symptoms or signs by which this condition can be recognized, and as late as 1923 Wearn wrote that 'coronary thrombosis with infarction of the heart is generally classed as one of the rarities of medicine.' But through the numerous studies and case reports which have been published in recent years the clinical syndrome presented by acute occlusion of the coronary arteries is now recognized with comparative ease."

The te m 'acute indigestion,' frequently appearing n the public press as a cause of death, is an example of the inaccurate and indefinite medical nomenclature. Acute coronary obstruction attended by collapse, upper abdominal pain, and nausea with vomiting may easily be confused with acute surgical conditions in the upper abdomen. Coffin and Rush (2) state that "in recent years surgeons have called attention to the 'acute abdomen,' but have neglected to stress the possibility of acute obstruction of the coronary arteries causing abdominal symptoms which may be ident cal with intra-abdominal emergencies." Friedenwald and Morrison (3), in an excellent article on the relation of cardiac and gastric affections, call attention to a group of cases of coronary thrombosis which bear a close resemblance to some serious abdominal surgical emergency. Others have noted acute abdomina symptoms in relation to thoracic disease but have not referred to coronary thrombosis in particular. The cases I here report serve to emphasize the sometimes marked similarity of this most serious cardiac condition to cholelithiasis, gastric hemorrhage, perforative gastric and duodenal ulcer, acute pancreatitis, etc.

Case 1.* White man, 62 years of age, merchant, planter, banker, inveterate smoker, has been in declining health for six or eight years, complaining of pain in the right back between the spine and scapula, breathlessness on exertion and occasionally 'a constriction' across the chest. The blood pressure read ng has been 130-140 systolic with 90-110 diastolic for several years. The condition had been diagnosed as myocardit s by several excellent men and the patient advised to restrict his habits and manner of living. This advice went unheeded. On November 14th past, this man retired feeling as well as usual, was awakened at three o'clock in the morning by a severe pain over and in the region of the fourth thoracic vertebra which radiated to each side. Associated with this was a feeling of abdominal distension and discomfort without real abdominal pain. There was no sensation of impending death, suffocation, or constriction of the chest. The patient was very restless and sitting up in the bed and physician called stated that his firs' impression upon entering the room was that 'this man

*Read before S. C. Medical Association, Florence, S. C., May, 7 1930.

*Report of case, seen in consultation by the writer, was furnished by Drs. L. P. Barnes and Robert Wilson. Appreciation for this courtesy is hereby acknowledged.

has gall-bladder colic.' Nausea and vomiting were not recorded as present. The skin was cold and moist, the complexion ashen gray, temperature 96 F., respiration 20, pulse 94 and of poor quality and tone. There was no arrythmia. The blood pressure was 142/90 and the heart sounds distant and only faintly heard. It was difficult to map out the size of the heart, because of the thick chest wall, but it was thought to be moderately enlarged. Abdominal distension was present but no tenderness, rigidity, nor masses. On the back there was definite tenderness over the fourth thoracic vertebra. Reflexes were normal. The eye-grounds showed moderate sclerosis, no hemorrhage, and normal discs.

Nitroglycerine and morphia ½ gr. were given with only partial relief. During the day the pain subsided somewhat and the blood pressure dropped to 121/85 with a pulse rate of 88 and temperature elevation ot 99 F. The discomfort in the back over the spine persisted. Urinalysis was normal, the leucocyte count was 7,500, and the differential count normal. The following day the blood pressure was recorded as 98/80, pulse 88 and poor in quality, and temperature 100.2 F. This patient remained at absolute rest in bed for several weeks, during which time his blood pressure reading was constantly low, and he daily had one or more attacks of pain in the back, usually worse after the night meal. After about twelve weeks of this illness, patient died suddenly of heart failure.

This case is more or less typical, however, the symptoms and physical findings do not permit of easy differentiation from gall-bladder disease. The case is reported for comparison in symptomatology with the cases reported later. This patient was known to have had cardiac disease for several years, which fact was of tremendous value in reaching a diagnosis. The pain was confined to the back and he suffered only a discomfort in the abdomen, or a feeling of distension. The later cases suffered severe abdominal pain.

Case 2. White man, 48 years of age, cotton buyer by occupation, has lived a very strenuous life for several years and has been greatly worried over business matters. An excessive cigarette smoker. The family history was negative except that father died of apoplexy. Past history not significant except that he had had all teeth extracted a few months before because of severe pyorrhea, and the blood pressure for the past several years has been 140/90.

For two months prior to the attack this man had been suffering from an indefinite digestive disturbance, flatulency, and a pain in the epigastrium. This came on about one hour after breakfast and persisted all day. Was always free of pain at night. Soda and other alkalies caused belching but gave no relief. He dieted carefully for several weeks but suffered just as much as when he ate anything and everything. Had been taking laxatives in an effort to get rid of the pain, though he had never been constipated. The abdomen was never tender to touch and there had never been any abdominal soreness on standing or walking.

The night before the attack, he took castor oil which acted three or four times. When last went to stool, felt weak and fainty, had profuse sweating, and a severe 'boring' pain in the upper abdomen. Was nauseated but did not vomit. I was called immediately and found the patient lying on the bed, cold and clammy, ashen in color, the radial pulse was not palpable and the heart sounds were not audible to the stethoscope. He was given caffeine sodium benzoate, adrenaline, and morphine with atropine and after forty minutes he was removed to the hospital on a stretcher. Two hours after the above attack the temperature was 96.8 F., pulse 84, respiration 18, and blood pressure 110/80. General examination gave no further information other than extreme weakness of and lack of tone in the cardio-vascular system. The heart sounds were of very poor quality and no cardiac enlargement could be made out. There was no arrythmia nor pericardial friction rub but the heart sounds were so faint and the chest wall so thick that such findings could hardly be demonstrated. The abdomen was soft, not distended, and showed no localized tenderness nor rigidity. There was moderate albuminuria with hyaline casts and acetone and diacetic acid present in the urine. Hemoglobin was 90%, red blood cells 4,750,000, color index .9, leucocytes 9,000, polymorphonuclears 80%. Gastric contents

disclose total acidity of 35 degrees, free hydrochloric acid 20 degrees, and no blood. The feces showed no blood chemically or microscopically. For several days following the attack the temperature was elevated to 99.6 in the afternoon.

This patient is still under close observation, and has been at perfect rest for four weeks. The blood pressure has not, since the above attack, exceeded 118/80 and the cardiac weakness is yet very evident but there has been no recurrence of pain and all abdominal distress and flatulency disappeared with the attack. Diagnosis—coronary infarction.

This case is reported because of the marked similarity to perforated gastric or duodenal ulcer and to massive gastric hemorrhage, particularly so in view of the fact that this man had been suffering for several months of a constant digestive disturbance. With this history in mind, I was positive at the first observation of the patient in the attack that he had a very serious upper abdominal accident. Otherwise I would not have subjected him to the exertion of moving him to the hospital.

Case 3. Colored man, 46 years of age, farmer, was known to have had hypertension for several years, the blood pressure reading usually being 200 to 220 systolic and 110 to 130 diastolic. His past history was otherwise negative. He was suddenly seized while at church services with a violent 'cramp-like' pain across the upper abdomen which felled him. He was carried to his home where I saw him about one hour after the onset. He was cold and clammy, temperature 95 F., pulse imperceptible, and writhing in pain which he described as a cramp and located across the entire upper abdomen. The blood pressure was 108/70 and the heart sounds barely audible. The upper abdomen was extremely tender, tympanitic, and the abdominal muscles very rigid. A tentative diagnosis of perforated ulcer or acute pancreatitis was made and consultation requested. The consultant, upon examining the abdomen, agreed that a surgical accident had occurred, and together we advised immediate operation. He was moved to the hospital and a nearby surgeon requested by the family. While preparing for the laparotomy urinalysis and blood examinations were made. The urine showed albuminuria and hyaline casts, the leucocyte count was 11,560 with a poly percentage of 88. The surgeon concurred in the diagnosis and the abdomen was opened in the upper midline. No intraabdominal pathology could be found to account for the attack. This man recovered from the operation and was watched for many months, in fact is stil being watched. The blood pressure did not exceed 130/90 for twelve months after this attack.

This case is reported to further emphasize the difficulty in differentiating between coronary occlusion and abdominal surgical accidents, and to record the recovery from an operation which was unnecessary and which might very easily have proven fatal. Here is a man who had a sudden attack of abdominal pain, accompanied by nausea and vomiting, shock, collapse, tenderness and a board-like rigidity of the abdomen. At operation, no abdominal pathology was found and in view of the fact that this man had hypertension for several years and the blood pressure dropped considerably during the attack *and remained subnormal,* postoperative diagnosis of coronary occlusion was made, not, however, until after the writer had heard a splendid discussion of this subject by Dr. Robert Wilson (4) while the patient was still in the hospital recovering from the operation. As further evidence of the cardiac origin of this attack, I wish to report that this case is now a chronic cardiac invalid, suffering repeated attacks of decompensation.

A discussion of this kind could not be well terminated without an enumeration of the differential diagnostic points of the condition under consideration. They are:

(1) The patient is usually past middle life and may or may not have experienced previous attacks of angina pectoris.
(2) The onset is abrupt, usually with pain of extreme severity, unrelated as a rule to food or exertion, varying in its location as substernal or epigastric, unrelieved by nitroglycerine, and often only partially relieved by morphia.
(3) Symptoms of shock, with anxiety, cold sweat, collapse, feeble pulse, low blood pressure. The face is usually ashen and sometimes cyanotic.

(4) Dyspnœa, which s sometimes urgent.
(5) Nausea and vomiting, and sometimes gaseous eructations.
(6) Signs of heart failure with cardiac enlargement, pulmonary œdema, and passive congestion of the liver and kidneys.
(7) Pericardial friction rub, inconstant and often fleeting, but of great diagnostic value when present.
(8) Slight fever and leucocytosis.
(9) Variations in the electrocardiogram.

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DISCUSSION

Dr. Robert Wilson, Charleston:

I would like to refer to two or three cases which I have recently had, and which I still have, in fact, under observation, which emphasize very forcibly the extreme difficulty of differentiating the two conditions which Dr. Jennings has discussed in this very interesting paper and which raise the possible suggestion that in some cases anginoid symptoms or those of coronary obstruction may be the sequence of an old gall-bladder lesion. These two cases were both ladies, and occurred about the same time. Both patients were beyond middle life; both had moderately elevated blood pressure; both had had for some time anginoid attacks, coming on after exertion and yielding to nitrites. Then each had a severe attack, coming on suddenly and followed after a short time by falling blood pressure. The pain did not yield to nitrites, but required morphin in considerable dosage. In a day or two there was a moderate elevation of temperature. In both cases the picture presented the characteristic features of coronary thrombosis, which was the diagnosis made. Both made a temporary recovery, with improvement in the blood pressure, and resumed their modes of life, although with some restrictions. The other day one of these ladies was taken ill suddenly with what she called "wind colic", which in a little while appeared to assume the characteristics of her former attacks. Nitrites did not give relief, and morphin was resorted to, which had to be repeated the following morning. Shortly after she had a chill, followed by a rise of temperature accompanied by a sharp pain over the gall bladder. There was very little doubt that this was a definite gall-bladder attack, and in the next few days it subsided completely. In the case of the other patient an attack occurring about the same time was followed by protracted fibrillation and persistence of a lowered blood pressure.

Here are two cases paralleling each other, presenting the same symptomatology, running much the same course, one an unquestioned cardiac and the other most probably a gall-bladder case.

In a third case typical anginal seizure were followed by an attack which warranted the diagnosis of cholelithiasis; the X-ray showed a characteristic shadow; and the surgeon confirmed the diagnosis by removing a large stone. Subsequently anginal attacks recurred.

These experiences illustrate the extreme difficulty encountered at times; and I think Dr. Jennings was justified in operating upon his case. The diagnosis might be aided materially by an electrocardiograph, which should be taken always when practicable.

It is my opinion that this type of cardiac disease is increasing. I am confident that in recent years I have seen a great many more cases of unquestioned coronary thrombosis than I did formerly.

Dr. W. R. Mead, Florence:

Dr. Jennings' experience in recommending surgery in a man suffering from coronary occlusion is somewhat less embarrassing than one which occurred to me about four years ago. Having been called into consultation by a surgeon in the case of a man complaining of typical gall-bladder symptoms, and having ascertained by cholecystography that the gall bladder was not functioning, I assured the patient that he should have cholecystectomy. The patient found it necessary to go home to make some preparations before reporting for surgery. Two hours after leaving the hospital the conductor of the train on which he was riding telephoned the hospital that he had suddenly toppled over dead in the seat.

It is always rather hazardous to say that a disease is on the increase. Such a statement frequently means that a physician has had his attention directed to the disease by some dramatic episode and has proceeded to repeat the diagnosis until it becomes a veri able hobby with him. Nevertheless I venture the opinion, based on personal experience, that coronary occlusion explains more of the acute cardiac conditions today than it ever has before. One eminent cardiologist has suggested that we are now experiencing the **vascular** end results of the widespread influenza epidemic of a decade ago. It should be noted in passing that this is one heart condition which is almost never due to syphilis.

The rather trying care of an unusually large number of coronary-occlusion cases during the past year has left me with a few impressions which Dr. Jennings has hinted at but which I should like to emphasize very briefly.

First: The intractability of the pain. If the pain is brief and of only slight intensity, it is probably not due to coronary occlusion, or it may represent a closing down of a branch of the coronary system premonitory to the final vascular catastrophe. I ordinarily give a half grain of plain morphia, together with 1-100 grain hyoscin, for the pain of sudden coronary occlusion. Frequently this has to be supplemented with whiffs of chloroform.

Second: The atypical radiation. Dr. Jennings mentioned the downward route. When it moves upward, it not infrequently goes into the base of the neck and into the lower jaw.

Third: The difficulty in obtaining a pathognomonic pericardial rub. By turning the patient on his left side and slightly on his face, this sound is sometimes heard when it can not be demonstrated with the patient flat on his back.

Fourth: The uncertainty of prognosis. One is never justified in regarding these cases as having any but the gravest outlook. If, two weeks after the definite occlusion, there has been no more pain, the blood pressure has shown a constant upward trend, and there has been no new arhythmia, some slight show of encouragement is justified. Even at this time, rupture of the ventricle may occur to confound one's sanguine outlook and terminate the picture.

Dr. Jennings' paper calls attention to a new and most serious problem which must be met by every surgeon who diagnoses an "acute abdomen" in individuals beyond middle life.

Dr. John F. Townsend, Charleston:

Coronary thrombosis necessarily supposes a coronary sclerosis. As medical means and medical appliances become more useful, our capability of diagnosing improves; but even after we have used the best medical means and the best appliances we can not, in a certain number of cases, make a definite diagnosis and know whether coronary thrombosis exists or not. In about ninety-three per cent of the cases we can make a diagnosis opthalmoscopically. It has been found by post mortem check that coronary sclerosis exists in ninety-six per cent of the cases in which there is retinal arterio-sclerosis of the hypertensive type and in about ninety-three per cent of the cases of retinal arterio-sclerosis of the senile type. These observations have been checked in the Roper Hospital on consultation work on cases in the cardiorenal service and on private patients consultation and otherwise. Some cases of lowered blood pressure, of course, are undoubtedly due to failing heart with hypertension, but I think many of them are due to the senile type of arterio-sclerosis, because in that type of arterio-sclerosis there is not a high blood pressure. You can certainly check them over ophthalmoscopically, and, as far as my limited experience goes, the ophthalmoscopic diagnosis has been proved in the cases in which we have had a post-mortem.

Dr. Hugh Smith, Greenville:

I wish to lend emphasis to what has been already said. In stressing the difficulty in deciding between an abdominal situation and coronary pains, I recall a case I saw several years ago. This was a gentleman forty or fifty years old whom I saw six or seven years ago. He seemed to be unquestionably anginoid. I saw the man two or three times in the course of a year with not the picture of a coronary thrombosis but with the picture of an angina. After he had been under my observation for about a year and a half he had one of these attacks. That particular case came to operation, had a gall bladder full of small stones removed, and has had no more attacks.

About the same time I saw the first patient I saw another, a man who lived a normal life, without excesses. He was shocked, suffering, the pain almost beyond relief. The man lived about three days. During that time he got about a grain and a half of morphin in twenty-four hours, and several times we had to resort to chloroform to give him any relief at all. He had a large thrombosis in the left branch of the coronary artery, confirmed by autopsy.

Coronary thrombosis is occurring more frequently, I am sure. I do not say it because we are thinking more about it; I see a different type of heart disease now. I am not at all sanguine about the prognosis. I have seen cases that had attacks two to three or four years ago that are still cardiac invalids.

Dr. Raymond Price, Charleston:

We must not forget that there are certain conditions of the abdomen in patients with cardio-vascular disease which require surgical intervention. I will cite this case here, a Negro man, aged forty, who came to the out-patient department complaining of inability to void. A sound was passed, and he went home. That night about nine o'clock he was brought to the hospital with severe pain in his abdomen, agonizing, which morphin failed to relieve. Amyl nitrite and nitroglycerine failed to produce any relief. This man had a marked, board-like rigidity of the abdomen. Chloroform inhalations were resorted to, after physical examinations revealed that he had hypertension and marked arteriosclerosis. It was thought advisable to give palliative measures and wait. However, during the night he still complained of the severe pain, several injections of morphin being necessary and also inhalations of chloroform to relieve the abdominal pain, but never satisfactorily doing so. He died early in the morning. Postmortem revealed that he had mesenteric thrombosis, with resulting gangrene of the intestines about twelve inches long. That is one point that must not be overlooked in these patients.

Dr. Jennings, closing the discussion:

I have nothing further to say except to thank these gentlemen fo their discussion. I particularly thank Dr. Wilson for saying that he sees no way out of opening these cases, because it makes me feel better.

EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M. D., F. A. C. S., CHARLESTON, S. C.

*OCULAR FINDINGS IN POST-ENCEPHALITIC PARKINSON SYNDROME

Dr. Isadore Givner, New York, N. Y.

The Parkinsonian syndrome, the most common sequela of acute encephalitis, has as part of its picture many interesting eye findings. When we consider that fifty percent of individuals who have bad Sleeping Sickness are prone to sequela, we realize that to recognize any stigmata even though slight will be as added information in detecting an individual as a post-encephalitic. Recently a case was seen where simulation of this syndrome was suspected, and it was the eye findings that enabled one to make a conclusive diagnosis, because of findings that a malingerer could not simulate

An opportunity recently was had at the Neurological Hospital, N. Y. C., of studying seventeen cases who had acute encephalitis from two to eleven years previously. This report attempts to bring together first, a comparison of the eye findings as generally accepted in the acute stage with those found in the post-encephalitic stage as to persistence, further development and new findings, second to have grouped the complete ocular findings of this syndrome.

In acute encephalitis one commonly makes the following observations:

1. Oculo-motor apparatus involvement.

This is said to be involved in fifty-three percent of cases. The most frequent findings is ptosis. This is rather unusual in appearance, resembling that seen in hysteria or myasthenia gravis, being partial without attempted compensation on the part of the patient by raising the corresponding eyebrow.

2. Stellwag's sign.

This is often present when there is stupor or lethargy. Tilney reports one patient observed four and a half minutes before winking occurred.

3. Dana's sign.

The normal upward rolling of the eyes, as occurs when the lids are closed, is occasionally absent.

4. Nyastgmoid movements.

These are noted to be not distinctly of either the vestibular or the ocular type, but rather a rhythmic motion back and forth due to the muscular condition of the eye.

5. Other ocular nerve lesions.

A complete third and sixth nerve paralysis as occurs in syphilis is rather infrequently observed. Likewise a simple internal and external ophthalmoplegia rarely occurs. The most common condition is a partial combination of both internal and external ophthalmoplegia. This picture points to a nuclear or supra

*From the Eye Service of Dr. James W. Smith—Neurological Hospital, N. Y. C.

nuclear lesion. The palsies are also frequently not stationary, having a tendency to alternate in some instances from day to day.

6. Argyle Robertson pupil.

This may be present as also paralysis of accomodation with normal pupillary reaction. There may be anisocoria.

7. Pappiledema.

A moderate degree of swelling of the nerve head may occur and is fairly common but rarely a severe choked disc.

The post encephalic patients reported on here ranged in age from twenty-two to forty-seven, only one however, being in the presbyopic age. All gave a history of acute encephalitis with exception of three. Eight gave a history of diplopia, which symptom appeared either as a first symptom or very early, and persisted from two days to four months. The post-encephalitic symptoms in general dated anywhere from a gradual continuation after the acute stage to an interval of seven years following the acute attack—the patients in this interval being able to carry on their daily routine with no trouble. One of the patients, a university student, volunteered the information that for three years following his acute stage he carried on his work with no appreciable difference.

On examination the following observations were made in these post encephalic cases:

1. Ptosis.

This was only present in two cases and only partially so in these, However, in ten of these cases there was an inability to use the accessory elevator (Frontalis) amounting to variations from complete inability to marked diminution in function. In seven of these, on asking them to look up at the time when the eyes rolled up to fix, the Frontalis was brought quite actively into play.

2. Stellwag's sign.

This was present in all but five cases—one patient remarking that she could sit through a whole picture show without winking once, which fact she thought was true because of the severe smarting when she did finally wink. This is not dependent on reduced corneal sensation, as all showed an absence of diminished sensibility.

3. Dana's sign.

This was noted in five cases.

4. Nystagmus.

This was present in only two cases and was rhythmic, suggestive of the tremor in other parts. However, upon ophthalmoscopic examination many showed a fine tremor which was not detectable by gross examination.

5. Cog-wheel jerk.

An observation common to all the cases was a jerky movement of the eye in looking from one side to the other. This is quite a distinguishing feature and recalls to mind the cogwheel resistance or irregular release in other parts, described by Tilney, that is elicited by passive motion.

6. Muscle examination—Convergence insufficiency.

As to the muscles perse, considering a near point of convergence of 60-90 mm. and exophoria of 4-8 for near as normal, fourteen of the seventeen patients showed a convergence insufficiency with near point of convergence from 100-500 mm. (tropia) exophoria ranging from 7-27, two Extropias, and ten showing additional weakness of external recti.

7. Argyle Robertson pupil.

This was not present in any of these cases. There were two anisocorias. In this connection a case was reported by Neustadter of a patient in whom he observed an Argyle Robertson pupil during the Acute Encephalitis. Some years later this was not present, the pupillary reaction was normal.

8. Fundus examination.

Normal fundi were observed in all cases excepting one which showed a pallor of the nasal side of one disc. Optic atrophy, however, has been reported as rarity.

9. Field examination.

Nothing abnormal was found. Lloyd has reported annular scotomata and changing hemianopsias.

10. Tension-normal.

11. Refraction.

All patients had normal vision with proper refractive correction. This is important in that we should not be satisfied in explaining a poor vision not helped by glasses as dependent on the previous encephalitis without having ruled out every other possibility.

Although not present in this series of cases, to complete the findings I should note two cases that I have observed with oculo-gyric crises. This is a rolling up of the eye balls with an inability to control this action. This crisis may last one to two minutes. Interesting in this connection is the fact that the knowledge of this sequela caused an internist to refer one of these cases for an eye examination with a diagnosis of post-encephalitis, this symptom being the only complaint.

What can we do for these patients? Systemically hyoscine bellafoline and tincture stramonium seem our best therapeutic aids.

The effect of the hyoscine is particularly interesting and proved to be a factor which had to be dealt with in these examinations. Most patients noticed a blurring of vision when reading which lasted for eight hours at the most. This factor was taken into consideration in the convergence tests. A slight overdose makes the pupil very large and immoblie to light and accomodation.

Occasion was had to see ½ gr. given by error to a patient who had been on this d ug for years. The symptoms were drowsiness, nausea, abolition of all tremor. The patient recovered and was none the worse for the experience.

Tincture stramonium being in use only of comparatively recent time, does not allow of fair judgment as yet as to its therapeutic value, but in the several cases in which it has been used, two things are apparent. First, a large dose can be given with seemingly no bad effects; second, a beneficial effect is had in regard to the tremor when taken along with the hyoscine. The dose should be started at 5 to 10 minims T.I.D. and increased one drop daily up to the therapeutic dosage for that individual. In these cases, we have used up to thirty-five drops three times a day. A good plan is to alternate the hyoscine and stramonium.

For the convergence insufficiency all the patients with weakened accomodation are relieved from blurred vision in reading by being given a suitable premature presbyopic addition for near. Our recent checkups show that this occasionally has to be strengthened after a few months. Pin point and prism exercises should be given a trial.

In conclusion, there are many more post-encephalitics being recognized today than ever before, and if this grouping of eye findings will enable one to detect these unfortunates, this short paper will have served its purpose.

SURGERY

Wm. H. Prioleau, M.D., Charleston, S. C.

HYPERTHYROIDISM WITHOUT VISIBLE OR PALPABLE GOITRE

This subject is discussed by Dr. Tucker of Cleveland in the American Journal o Medical Sciences of October 1928. In some instances the condition is explained by the fact that the thyroid gland grows posteriorly or even behind the larynx and thus is barely palpable. In others there is actually very little enlargement, though the structural changes of the gland are well marked. These are essentially a cellular hyperplasia, an increased vascularity and a varying amount of hypertrophy. Though some hypertrophy is always present, the amount is by no means an index of the severity of the disease. A large gland may be in a resting stage while a small gland may be very hyperplastic. In many cases it is impossible to correlate even the microscopical structure with the clinical findings. Dr. Tucker emphasized the point that the diagnosis of hyperthyroidism should be made upon the characteristic symptoms and physical findings even though there is no demonstrable thyroid enlargement. The most constant symptoms are palpitation, tachycardia, increased nervousness, ease of fatigue and loss of weight in the presence of a good appetite. In the cases which the author presents the diagnosis was confirmed by recovery following thyroidectomy.

Discussing further the diagnosis of hyperthyroidism the author states that there are a number of cases in which one or more of the characteristic symptoms is absent. In pronounced cases this causes little difficulty but in mild and borderline ones it is first necessary to rule out other diseases before a diagnosis of hyperthryoidism can be made. Tuberculosis, diabetes, hypertension and arteriosclerosis are the diseases most likely to cause confusion especially if there is also present some enlargement of the thyriod gland. Though one of these diseases is definitely diagnosed this does not exclude the presence of an associated hyperthyroidism. The combination of hyperthyroidism with tuberculosis or diabetes is very common. As regards treatment the relief of the hyperthyroidism by thyroidectomy has a very beneficial effect upon both tuberculosis and diabetes.

The author advises against performing tonsillectomy in the presence of hyperthyroidism. He has seen several cases in which the severity of the disease has been greatly augmented by this procedure. The thyroidectomy should be done first. In his experience much valuable time is lost in the endeavor to treat hyperthyroidism by iodine or Rœtgen therapy, when the surgical operation upon the gland gives such remarkable assurance of a cure.

PUBLIC HEALTH

By B. F. WYMAN, M. D., Director of County Health Work, Columbia, S. C.

A NEW USE FOR THE MALARIAL PARASITE

"The antagonisms which exist between certain diseases have been observed over a long period of time. We believe that the artificial inoculation with malarial parasite in the treatment of late syphilis by Wagner-Jauregg was the first instance in which infection with one disease was used to cure another, though the attemped cure of certain tumors by inoculation with the streptococcus or its products is a matter of record.

The most recent development is the use of artificial infection with the malarial organism for the cure of gonorrhea. An observation made in Acre tends to how that in Palestine cases of gonorrhea following a previous infection with malaria cleared up more quickly than usual. The high temperature in malarial attacks is credited with having a beneficial effect, and other similar instances have been recorded.

The Lancet (England) calls our attention to the fact that John Hunter a century ago observed "the suspension or cure of a gonorrhea by fevers." It is also stated that during the past five years several German practitioners have used malarial inoculation with success in the treatment of gonorrhea in adult females.

The average number of days in the hospital in cases of military gonorrhea is said to be 55.7 in England, 51.33 in India, and 46.7 in West Africa where the incidence of malaria is high. It is further stated in the report referred to that neurosyphilis is much more prevalent in tropical towns than in the villages of the same country, probably on account of the greater prevalence of malaria in the villages, approximately 70 percent of the inhabitants being infected; whereas, in the towns, preventive measures and drainage have cut down the incidence of the disease."

Editorial, American Journal of Public Health, January, 1930.

PRESIDENT'S PAGE

By Kenneth M. Lynch, President, South Carolina Medical Association

To the Members of the Association:

The fact of a most strenuous year with which I am faced, on account of the coincidence of other similar official obligations, as well as certain other time consuming professional duties outside of regular vocational ties, makes it physically impossible for me to make the extensive personal contacts with the County Medical Societies which I would like. I am planning, therefore, to attend the District Meetings and what others I can, and, in lieu of personal visits to those from which I am prevented, to make contact with the whole Profession of the State through the medium of the President's Page in the Journal. It is my intention to write a series of brief discussions of the interests of organized medicine with the immediate purpose of drawing attention to the trend of the times and the possibility of accomplishment.

THE AIMS AND OBLIGATIONS OF ORGANIZED MEDICINE. I.

Research in Medicine

The word **research** is not one of common or popular usage. It is frequently used in a manner of "high-hatting" by some would-be scientists and is often abused by commercial advertisers to confuse and impress uninformed people.

In accordance with the times it should be a word common to the vocabularies of at least all people of fair to good general education. It is a simple word and means exactly what it spells, RE-SEARCH, to search again and again for the truth. It spells the foundation of all true progress; it is recognized by the industries of modern times as the basis upon which all forward movements must be built.

In medicine, as in all other progressive industry, the order of the day is **research.** Vast sums of money are being spent with the concious knowledge of a sound investment from which dividends will accrue and multiply. Expensive medical palaces have been and are being built as residences for the spirit and the labor of **research,** but it is not always the institution of heaviest physical endowment which is most productive. At times one may question the proportionate division of endowment between the plant and the worker in the plant. It sometimes seems that the cart is placed before the horse. The formula out of which what we call genuis is most apt to result is trained and imaginative brains with the urge to explore the unknown and a reasonable opportunity to do so.

Laboratory is, also, a word about which we twist our tongues more than we exercise our thoughts. It, also, means exactly what it spells—a place dedicated to a certain work, a LABOR-ATORY. Progress is slow when we are limited to a growth of knowledge by means of only our natural senses. When we can exercise only our wits we must wait the accumulation of evidence to overcome the numberless elements in the unknown, not subject to discovery by natural means of observation, before any proof may be established. When laboratory measures and methods, measures of precision and scientific control, are available, progress is by leaps and bounds; epochs are made and knowledge outruns practical application. It is the contrast between empiricism and the "scientific method."

We are beginning to learn the advantage to the whole people of drafting for the common good the services of those inherently qualified to show genuis. Perhaps the time will come when we will selfishly search among our youth for those who may be inherently endowd to contribute to the progress of the sciences and arts—to knowledge —and provide them with the training to bring them to their earliest productive maturity—for the common good.

One of the aims and obligations of organized medicine is the promotion of research into the unknown of the diseases which scourge mankind. South Carolina is a fertile field for medical research. The best and most immediate means of taking advantage of the opportunity is through the active support of the Profession in assuring the providing of personnel and facilities—that the work may be done.

PEDIATRICS

R. M. POLLITZER, M. D., GREENVILLE, S. C.

There are at least four conditions which are a source of much worry to the pediatrician. I have in mind, epilepsy, asthma, eneuresis and eczema. Even though a tremendous amount of work has been done on them and the literature is full of accounts of excellent results by some special form of treatment, yet we approach each case with a good bit of doubt as to our ability to bring about a cure quickly and permanently.

In the Archives of Pediatrics of August 1930, Dr. Harry Grossman writes very optimistically of the use of crude coal tar ointment in eczema as proposed by J. C. White in 1923. Dr. Grossman very truly remarks that, notwithstanding the work done on allergy and the various theories as to the etiology of eczema, the treatment of infantile eczema remains empirical. Further, telling the parents that the condition is not serious, and that the baby will probably spontaneously recover by the time it is one or two years of age is not very helpful.

The tar is used in 20, 10 or 5% according to the severity of the lesions. The treatment requires from one to fourteen weeks. He reports a series of 47 cases. Most of his patients were males. In 11 cases the disease began during the first month.

His conclusions are that, "1. Infantile eczema is curable, 2. Crude coal tar is the most suitable drug, and 3. Persistence, perseverance, and cooperation are necessary."

During infancy colic is so frequent that very often it is accepted as a necessary ill, by the parents, and, at times, also by the doctor. Excepting those cases due to hunger which are quite common, the remainder are due either to indigestion of one type or another, or to pyloric spasm. Then too, vomiting either with or without colic is almost as frequent. In the majority of instances, not due to overfeeding or an acute illness, it is the result of pyloric spasm or of pyloric stenosis. The author strongly believes that the majority of babies who have stenosis, sooner or later will require surgical intervention. Nevertheless surgery too soon is almost as bad as surgery too late.

About one-third of my cases have been cured medically. Atropine in colic or in spasm and even in stenosis if given in large enough doses is a most valuable drug. Of course it goes without saying that the infant should be seen frequently and accurately weighed.. Once the infant has been permitted to lose too much weight or become greatly dehydrated, we are liable to have a dead baby. Unfortunately at times atropine produces fever and rather alarming symptoms. On account of that E. J. Barnett has been recently using phenobarbital (luminal) in these cases. In the Archives of Pediatrics of July 1930, he reports a series of 12 cases, in which he had excellent results. He used the drug in the dose of 1-8 to 1-4 grain, several times daily. The procedure sounds rational and is worthy of trial.

About 15 years ago I was told by a well-known pediatrician that in a very short time diphtheria would become extinct in this country. His prediction has not come to pass. In fact last year there was an increase in the incidence. We see annually in the United States many thousands of cases of diphtheria and of these about 10% are fatal.

As Shaw and Thelander have written—"When one considers the ease with which diphtheria may be prevented by the routine use of toxin-antitoxin mixture, it seems strange that many cases of the disease should occur, and when one further considers the fact that treatment is almost unfailingly successful if employed early, deaths from diphtheria seem astounding." ("The Causes for Severity in 100 Cases of Severe Diphtheria" E. B. Shaw, M.D., & H. E. Thelander, M. D., Archives of Pediatrics, March, 1930.) They have carefully analyzed this series of cases to find out exactly why we still see severe diphtheria and at whose door the blame lies. They found that responsibility for delay was divided between doctor and parent. "In 41 instances with 14 deaths the parent failed to call a doctor until the desperate nature of the illness was apparent to untrained eyes." That is they did what most parents do; namely, undertake to practice medicine themselves, either for the pleasure and glory, or more likely to save spending money. But sad to relate and greatly to the discredit of the profession, in 53 instances astonishing as this may seem, the physician allowed a throat process to continue to a similarly alarming extent before instituting proper treatment, and fatalities resulted in 24 cases." In five of these cases there is little to be said in defense. Two of these ill children were treated over the telephone for several days, at the end of which time examination showed typical diphtheria. Telephone treatment is one of the most pernicious practices of the day. It unfortunately pleases the mother and saves the doctor much time; but occasionally costs a life. For Diphtheria is one disease in which time is a vital factor. Almost as bad a practice is failure to examine the child's throat. The procedure does take a few minutes, and is at times disagreeable to all parties, but even so can not be omitted. Further as most of us know, small children rarely complain of sore throat, and in diphtheria there is less pain than in some other types of pharyngitis or tonsilitis.

"In 34 cases, with 18 deaths, delay in treatment was caused by difficulty in differentiating diphtheria from some other respiratory illness." None of us are perfect, and probably some of these errors are excusable. But one incident tending to show how some people can miss the mark is cited. A patient was operated upon

for suppurating glands of the neck. No pus was found, and then the anæsthetist happened to discover a membrane in the throat. Too often one picks up the scalpel before examining the patient. Indeed both the laity and many of the profession are too impatient to spend time making a diagnosis when the operation will so easily clear up the whole situation. The surgeon is entitled to our admiration but he should not displace the examining doctor.

Failure to take a throat culture and too great reliance on a negative report are both common mistakes.

In treatment, aside from not instituting it soon enough, the next greatest error is giving too small a dose of antitoxin. Too many units may be wasteful but too few will not neutralize enough toxin to save a life.

The authors of this very informative and interesting article, conclude as follows. "The conclusion is inescapable that by careful throat examination of sick children—frequent use of but not dependence on the laboratory aids to diagnosis; delays in diagnosis may be shortened, and the severity of symptoms materially reduced."

In this State of ours there is still diphtheria, and it is no rarity to have a death. We might well ask ourselves each time such occurs whether it was the result of ignorance or of carelessness and of whose? And then going one step fu ther how many of us tell all our mothers that diphtheria is a preventable disease, and that all infants preferably before one year should be protected by the administration of toxin-antitoxin, or toxoid? If we do, then after that the responsibility is theirs and we have at least attempted to pass on to our lientele one of the greatest blessings of modern medicine, rather than still ignoring the fact that preventive medicine is here at hand and if we fail to practice it the fault is ours.

PHYSIOLOGIC DISTURBANCES INCIDENT TO OBSTRUCTIVE JAUNDICE

A. C. Ivy, Chicago (Journal A. M. A., Oct. 11, 1930), asserts that in obstructive jaundice there exist a number of failing physiologic mechanisms and it is not known which one is primarily concerned. The fundamental nature of the reactions involved in producting the physiologic disturbances is not completely understood at present. The literature indicates that a carbohydrate diet with milk and cod liver oil and calcium administration are worth while therapeutic procedures in this condition. The fact that the problem is being attacked by several groups of investigators augurs well for the future of the understanding of physiologic disturbances in jaundice.

MENACE OF MENTAL FACTORS IN BODILY DISEASE

Cornelius C. Wholey, Pittsburgh (Journal A. M. A., Oct. 11, 1930), cites three cases which represent somewhat extreme instances of the extent to which apparent surgical and medical syndromes may mask the real disease, and in which mental factors become converted into bodily expression. Less pronounced conditions of invalidism and organic disturbance are frequently brought about wholly, or are exaggerated, by mental or emotional maladjustments. Consideration of the mental situation in no way, either by reference or in fact, presupposes any slighting of the organic agencies of disease. Evaluation of mental factors necessitates study of the emotional life of the individual, knowledge of the family setting and, at times, a readjustment of environment and domestic relations. In "frozen" cases, "cracking up" the deadlock is well nigh impossible. Early detection of the morbid process, with firm and tactfully applied measures, will alone arrest the morbid infection. Though in certain instances it is conceded that a degree of organic change may be present, its relationship to the exaggerated symptoms could, at most, only be that of partly determining the sympathetic pathway to be followed by the neurosis.

SCURVY IN ADULTS

Nine cases of scurvy in adults were studied by Stacy R. Mettier, George R. Minot and Wilmot C. Townsend, Boston (Journal of A. M. A., Oct. 11, 1930), eight of which occurred in elderly males. Scurvy can be precipitated by infectious processes in individuals with certain types of chronic nutritional instability. Arteriosclerosis may favor the development of the disease. In adults with scurvy, anemia is common and often pronounced. Fruit, green vegetables and fresh liver, foods which are rich in vitamin C, can cause in these patients a prompt response of reticulocytes and rapid regeneration of blood. Neither large doses of iron nor the substance potent in pernicious anemia appear to accomplish these effects. The bone marrow in two cases of scurvy was examined microscopically, and it appears to be of the type that occurs in what is often spoken of as secondary anemia. Vitamin C apparently can have a specific effect on erythropoiesis when there has been a chronic lack of this vitamin.

BOOK REVIEWS

DIETETICS AND NUTRITION, by Maude A. Perry, B. S., Formerly Director of Dietetics at The Michæl Reese Hospital, Chicago, Illinois, and at The Montreal General Hospital, Montreal, Canada. St. Louis: The C. V. Mosby Company.

This is a new book covering a wide range of dietetic suggestions both in health and in disease. While it may be of greatest value to training schools for nurses and for the nurse in active practice, yet there is a wealth of information available for the physician.

INFANT NUTRITION—A TEXTBOOK OF INFANT FEEDING FOR STUDENTS AND PRACTITIONERS OF MEDICINE, by Williams McKim Marriott, B. S., M. D., Professor of Pediatrics, Washington University School of Medicine; Physician in Chief, St. Louis Children's Hospital, St. Louis. Illustrated. St. Louis: The C. V. Mosby Company, 1930.

The author of this book is looked upon as an authority of world wide acknowledgment. Perhaps no book within the last ten years has received more favorable comments from pediatricians. It is a manual which includes many suggestions to the busy practitioner in the domain of the diseases of children. The author has done much to simplify infant feeding. His suggestions are clearly defined in thi volume.

PERSONAL AND COMMUNITY HEALTH, By Clair Elsmere Turner, M.A., Dr. P.H,. Professor of Biology and Public Health in the Massachusetts Institute of Technology; Formerly Associate professor of Hygiene in the Tufts College Medical and Dental Schools; Sometime Member of the Administrative Board in the School of Public Health of Harvard University and the Massachusetts Institute of Technology; Fellow American Public Health Association; Major, Sanitary Corps, U. S. A. (Reserve). Third Edition, St. Louis: The C. V. Mosby Company, 1930.

The out-put of health manuals, magazine and newspaper articles, is enormous at the present time. Some are too complicated to be of value to the laity but suffice it to say that the striving after a common ground for the intelligent discussion of the health problems of the individual is an important one. The author has met most of the requirements for a common sense view of the subject.

GONOCOCCAL INFECTION IN THE MALE, By Abr. L. Wolbarst, M. D., Urologist and Director of Urologic Clinics, Beth Israel Hospital; Consulting Urologist, Central Islip State Hospital, Manhattan State Hospital, Jewish Memorial Hospital and Madison Park Hospital. Second Edition, completely revised and enlarged, with one hundred and forty illustrations, including seven color plates. St. Louis, The C. V. Mosby Company, 1930.

This is an admirable book, splendidly illustrated, and presenting the subject from a conservative viewpoint. The general practitioner will find it helpful and will be able to carry out the therapeutic measures advised in most cases.

TROPICAL MEDICINE IN THE UNITED STATES By Alfred C. Reed, M. D., Professor of Tropical Medicine, The Pacific Institute of Tropical Medicine Within The George Williams Hooper Foundation for Medical Research of the University of California. 60 Illustrations. Philadelphia and London: J. B. Lippincott Company.

As the author states we are not accustomed to think in terms of tropical medicine with reference to the United States but he has made a splendid argument to the contrary and brought to our attention a most admirable treatise on the subject. A work of this kind must necessarily incorporate within its pages a wealth of illustrative material to make the contribution most worthwhile. This has been done in an admirable way. The section on Undulant Fever is good. We quote one paragraph on this interesting disease which most recently concerns us here in South Carolina.

"Abortus type. This is the milder d'sease which is more common in the United States. It is caused by Brucella abortus and is less infectious and less virulent than the Brucella melitensis of true Malta fever. No deaths have been reported; the course tends to be shorter and milder; complications are less numerous and less severe. Many cases are ambulatory. Doubtless many cases of continued low fevers of unexplained nature belong in this category."

We are pleased to commend the book without reservations.

THE SURGICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month.) Volume 10, number 4. (Southern Number—August 1930) 268 pages with 96 illustrations. Per clinic year (February 1930 to December 1930). Paper, $12.00; Cloth, $16.00. Philadelphia and London: W. B. Saunders Company.

This book comprises the papers of quite a number of distinguished surgeons of the South. We note with pleasure the contributions by Dr. Le Grand Guerry of Columbia on Shock Following Removal of Gauze Drain and a contribution by Dr. R. G. Doughty of Columbia on Bullet Wound of the Cauda Equina.

THE READY REFERENCE MEDICINE AND SURGERY MONOGRAPH ON MALARIA, By D. Drysdale Anderson, M.R.C.S., L.R.C.P., D.T.M. and H., D.P.H., (Eng.), Medical Officer of Health, West African Medical Staff; Formerly Tuberculosis Officer, Mauritius Fellow, Royal Society of Tropical Medicine and Hygiene, Member National Association for the Prevention of Tuberculosis (England), Fellow Royal Colonial Institute. Introduction by Allen H. Bunce, A.B., M.D., F.A.C.P., Department of Medicine, Emory University School of Medicine.

In reviewing this book perhaps it will be advisable to depart from our usual custom and publish in full the author's purpose.

"In presenting this the initial monograph of The Ready Reference Medicine and Surgery on the subject of Malaria we are incorporating some features of practical value not previously carried in other medical publications. 1st. Marginal space for physicians to make personal memorandums and notations. 2nd. Perforated sheets indicating by the page numbers just where the new worth while advances are to be tipped in to keep the work completely up to date in permanent binding for a period of years. 3rd. Blank pages for recording histories of unusual cases. In the introduction Dr. Bunce has given his opinion of the value of this monograph on Malaria by Dr. Anderson, and we desire to express our gratitude to these gentlemen as well as all others who have so generously and unselfishly contributed to make the work possible. The continued cooperation of the leading men of the Profession is solicited and will be appreciated."

It can readily be seen that this is the beginning of an ambitious plan to provide monographs of great scientific value to the profession from a practical every-day working standpoint. In recent times encyclopedic systems of medicine have come into vogue but in no way displaced the monograph. There will always be a demand for this type of books. This particular volume is a beautiful product of the printer's art. It is handsomely bound. The illustrations are unique in many respects. In fact, we know of no recent work in which the illustrations on Malaria are comparable. The author appears to be an authority of unquestioned experience and ability. We are glad to recommend this Southern book to our readers as a most interesting volume. We look forward to the development of the plan of the publishers with keen interest.

RELATION OF SPLEEN TO JAUNDICE

From a correlation of research facts taken from the literature up to the present date, Robert Lee Payne, Norfolk, Va. (Journal A. M. A., Oct. 11, 1930), concludes as follows: 1. A certain amount of red blood cell destruction takes place in the spleen. 2. A certain amount of bilirubin is formed in the spleen. 3. The amount of red blood cell destruction and bilirubin formation in the spleen is relatively small as compared with the consummation of these functions elsewhere in the body. 4. That hyperbilirubinemia associated with dysfunction of the spleen is dependent on not only the spleen but the entire hematopoietic system must be considered as an important contributing factor in evaluating the relation of the spleen to jaundice. Particularly must it be remembered that there is commonly associated a hepatitis in which failure of the liver cells to filter bile pigments represents an active role in the production of the jaundice.

CLINICAL SIGNIFICANCE OF JAUNDICE

M. A. Blankenhorn, Cleveland (Journal A. M. A., Oct. 11., 1930), asserts that the first and most important significance of jaundice is the possibility of stoppage of the ducts. To make a diagnosis of obstructive jaundice, one of the three common procedures is generally followed: 1. If there is a history of colic, one argues from cause to effect and says that the stone that causes colic obstructs the duct. 2. Tests for liver disease or tests of liver function can be done, and the finding of liver disease or disordered function excludes obstruction by substituting another cause. 3. The symptom of jaundice can be studied to see whether obstruction of the ducts alone could give such a distribution of of bile pigment. He describes in detail the work that has been done in these procedures. He says that the differentiation between painless jaundice due to stone and catarrhal jaundice is often impossible; likewise the recognition of arsphenamine jaundice when there has been abdominal pain. No progress in the problem is in sight, if all the measuring and testing are done in the obscure and doubtful cases. It is clearly the duty of the surgeon to write more about obstructive jaundice to aid in the problem. He sees no help from the physician who seldom handles obstructive jaundice. He sees no help from the physiologist or the biochemist. It is his aim to emphasize the value of methods as they now stand; viz., the icteric index and the examination of duodenal contents and feces, when applied to clear-cut and uncomplicated obstructive jaundice. With better information of the common, one can hope to deal with the uncommon. Instead of the surgeon receiving help from the physician in the problems of jaundice, it is clearly the duty of the surgeon to furnish this help to the physician.

SOCIETY REPORTS

ANDERSON COUNTY MEDICAL SOCIETY

The September meeting of the Anderson County Medical Society was held at the John C. Calhoun Hotel, Wednesday, September 10th, 1930, 12 noon. The meeting was called to order by the president, Dr. Thos. R. Gaines.

The minutes of the previous meeting were read and approved.

The following resolution that was drawn up by Public Health Committee of the duties of the County Health Director was re-read before the Society.

After considering the resolution passed by the S. C. Medical Association, we are in accord in the following statement of the duties of the County Health Director:

(a) Educational: Health Literature distributed, lectures and talks on Health topics, inspection of school children, display of maps and exhibits.

(b) Preventive: Administration ot those unable to pay for it of inoculation against Typhoid, Diphtheria, etc.

(c) Sanitation: When no Board of Health in authority, or upon suitable request, inspection premises, public buildings, milk supply, water resources.

(d) Diagnosis only of apparently communicable diseases, such cases to be remitted to their own physician for treatment.

(e) To disseminate among the womanhood of our land saner ideas of motherhood, inducing them to appreciate and obtain better obstetrics.

(f) Treatment of cases not to be considered a part of his duties, whether by surgical or medical remedies or otherwise.

Dr. Frank Lander made motion that this resolution be adopted by the Society it having received a second—was therefore fully discussed by the following Doctors: Dr. Wade Thompson, Dr. W. T. Lander, Dr. H. W. Corbett, Dr. S. C. Dean, Dr. H. M. Daniel, Dr. C. S. Breedin, and Dr. J. R. Young. Dr. Young offered the following amendment to this resolution: RESOLVED that the chairman appoint a publicity committee, whose functions shall be to select and prepare for publication in our co-papers suitable articles setting forth the scope and quality of the public Health work being attempted by our County Health Unit, and thereby giving the approval of the County Medical Society to this work. The resolution was voted on and carried.

Out of respect for Dr. J. F. Shirley late departed member the Society stood with bowed heads for a period of one minute.

The president appointed the following committees to make suitable resolutions as a tribute to memory of Dr. Shirley, Drs. D. J. Barton, J. R. Young, and Frank Wrenn.

The Scientific Program was presented by Drs. J. C. and H. H Harris; the subject being "Treatment of Carbuncles," discussion was general.

Luncheon was served.

Members present twenty-four.

D. J. Barton, M.D.
Secretary.

COLUMBIA MEDICAL SOCIETY MEETS

Meeting called to order by the President, J. Heyward Gibbes, at 8:30 P.M., September 22, 1930.

Business of last business session read and adopted.

Dr. P. V. Mikell presented a case of laryngeal tuberculosis and lupus vulgaris without a demonstrable focus of infection in the lungs.

The case was discussed by Dr. Mayer who stated that there was no lesion in lungs clinically. Dr. Floyd Rodgers said that he had to change his former opinion of no pulmonary lesion from an X-Ray standpoint. He presented a very interesting feature of the case as sarcoid involvement of the long bones of the hands and feet in association with lupus vulgaris of the olar of the nose. Only thirteen cases of the like had been found in the literature. Dr. Allison presented the case from a detertological standpoint which was very interesting.

The case was a negro woman of 40 who was improving under rest, chaumooga oil and X-Ray treatment.

Motion made by Dr. Mikell that the Columbia Medical Society invite the Southern Medical Association to meet here if feasible. Motion seconded and passed.

Dr Harmon reported on milk supply committee. Motion that the Columbia Medical Society adopt the recommendations seconded. It was discussed by several members (Drs. Setzler, Payne, Bunch and W. R. Barron). Motion passed. Dr. Payne will send copies of the U. S. Milk Ordinance and the one now used by the Columbia Board of Health, to the members of the Columbia Medical Society.

Motion that the same members of the milk supply committee continue to act in conjunction with the Columbia Board of Health. They are namely Dr. Harmon (chairman), Dr. Setzler and Dr. Marion H. Wyman.

September 22, 1930.

Mr. Chairman and Members of the
Columbia Medical Society:

Your committee has, to a limited extent, investigated conditions pertaining to the milk supply to the inhabitants of the City of Columbia. We met with the City Board of Health and had a very f ank and free discussion. They outlined their methods of handling milk. They also submitted to us a written copy of their laws, rules and regulations which we think in the main are very good. We visited a number of dairies and studied the physical equipment in and around

them, all of which we found to be in a general satisfactory condition.

After a summary of all the facts pertaining to our milk supply, we recommend the adoption of the following resolutions:

First. That this Society go on record as suggesting to the City Board of Health that we think it is wise to adopt a standard milk ordinance such as adopted by the South Carolina State Board of Health and the United States Public Health Service as to grading and labeling all milk in grades A. B. C. and D.

Second. That there is a disease known as Undulant Fever and according to the reports in our possession from the United States Public Health Service, this infection is transmissible through milk from milk cattle to the human race, and furthe that this is a very loathesome and dangerous disease, one that we haven't any treatment for, and we recommend that all milk cattle be tested out for this infection and those that are found to react, to be eliminated from the herds, or the milk to be pasteurized before being placed upon the market for human consumption.

Third. That all milk failing to come up to the standard of A grade as laid down by the South Carolina State Board of Health and the United States Public Health Service, including showing evidence of being free from undulant fever infection, shall be Pasteurized before being offered for use to the inhabitants of the City of Columbia. S. C.

Respectfully submitted,
Samuel E. Harmon,
John B. Setzler,
Committee.

September 22, 1930.

Clinical pathological conference case presented by Dr. Madden. Case was a white man of 33 years, evidently intoxicated, sitting up in bed appearing very sick. Had a very large liver. Died after being in the hospital only 4 hours.

Diagnosis of cirrhosis of liver made.

Post mortem diagnosis made by Dr. Plowden as acute hemorrhagic pancreatitis with blockage of cystiduct cirrhosis of liver with fatty infiltration of this organ.

Thirty-two members of the society present.

Society adjourned at 9:55 P. M.

Respectfully submitted.
William Weston, Jr.
Secretary.

-:- NEWS ITEMS -:-

Dr. Sylvia Allen, formerly of Charleston, has accepted the position of Resident Physician at Winthrop College. Dr. Norma P. Dunning, having resigned to take up missionary work in India. Dr. Allen has rendered distinguished service in organized medicine, especially in the domain of mental hygiene.

Dr. James A. Hayne, State Health Officer, will be one of the speakers at the Fort Worth meeting of the American Public Health Association in October. Dr. William Weston will also deliver an address there along the lines of his well known investigations of iodine content of South Carolina grown products.

The State Board of Health met in Columbia, September 16. Dr. Robert Wilson, President, was in the chair. The Following members were present: Drs. George Dick, W. R. Wallace, Davis Furman, F. M. Routh, Lee Carpenter, William Egleston, E. A. Hines, James A. Hayne, State Health Officer.

Quarterly reports were received from all the Departments giving the detailed progress of the work throughout the States. The Board meets quarterly and often at other times when business requires.

The York County Medical Society recently held a joint meeting with the Woman's Auxiliary and a number of invited guests to the d light of everybody present. York County has a strong organization functioning in a splendid way. Dr. Norma P. Dunning is the retiring President.

The new building at the Medical College of the State of South Carolina to house the Department of Anatomy and Pathology, also, the Library is reported to be under construction and to be completed at an early date.

Dr. Edgar A. Hines, Editor in Chief of he Journal visited recently the new Medical School of Duke University.

Dr. Lee Milford, Surgeon of Clemson College, together with a large staff of specialists made a physical examination of the five hundred or more freshmen entering Clemson College for the fall session. Dr. Milford, has organized one of the most extensive plans for health examinations of the cadet corps of any institution in the South.

The Columbia Medical Society has recently arranged with the Columbia Public Health Library to provide a special department with thorough library service for medical books and periodicals. This is an advance step and will be watched with keen interest. Dr. S. E. Harmon is the Chairman of the Comm ttee whose untiring energy has b ought about this most desirable arrangement. The success of the plan will be watched by organized societies in other localities with a view to a similar arrangement.

Dr. J. L. Bolt for many years the efficient Secretary of the Pickens County Medical Society has moved from Easley to Six Mile in Pickens County and connected himself with the well known hospital there.

An elaborate dinner party was given Dr. W. A. Tripp, Easley, S. C., in honor of his 64th birthday by his wife and seven daughters-in-law, September 24, 1930. Thirty-seven covers were laid for children and grandchildren and a frosted cake with 64 candles made the centerpiece. The dinner was served by four granddaughters as follows: Misses Willie Gentry, Eloise Tripp, Jessie Tripp and Lydia Tripp. Dr. Tripp represented his county in the legislature for several successive terms. Besides his large practice he manages several hundreds of acres of farm lands, has his own cotton gin, sawmill, blacksmith shop, thresher and cane mill. In addition, Dr. Tripp is the President of the Board of Trustees of the Medical College of the State of South Carolina, Charleston, S. C.

Dr. James Pickard Jacobs, a native of North Carolina, who had been engaged in health work in India for ten years, was elected permanent Secretary-Treasurer of the North Carolina State Board of Health and State Health Officers, September 24, 1930. He was elected at the Board meeting held at Raleigh to fill the vacancy caused by the recent death of Dr. Chas. O. Laughinghouse. Dr. Laughinghouse delivered an address before the South Carolina Public Health Association at Florence in May, 1930.

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EDITORIAL

GETTING READY FOR GREENVILLE MEETING, 1931

Many of the details of the next meeting of the State Association have been considered and settled upon. The Committees on Scientific Program met recently with President Lynch and agreed upon the invited guests and the general scope of the program. Dr. John A. Kolmer, Professor of Pathology, of the University of Pennsylvania will be one of the speakers. Dr. Dean Lewis, Professor of Surgery at the Johns Hopkins Medical School will be another speaker. These gentlemen are well known in medical circles everywhere and their messages will be inspiring and well worth listening to. It has been determined to emphasize by a comprehensive symposium some phase of psychiatry. Some of the invited speakers to appear in this symposium are as follows: Dr. C. F. Williams, Superintendent of the State Hospital, Columbia, Dr. O. B. Chamberlain, a Professor in the Medical College at Charleston, Dr. J. M. Beeler, Superintendent of the General Hospital, Spartanburg. This decision on the part of the Committee was arrived at because of the wide spread interest in these subjects, not only on the part of the profession, but also by the laity. The program will be limited to twenty-five papers but considerable time will be given over to volunteer readers. Every facility is at hand in Greenville for an unsurpassed meeting. The entertainments, while planned to be simple, yet will be given a prominent place. The Woman's Auxiliary to the Greenville County Medical Society is a splendid organization, in fact one of the best in the Southern States, already planning to cooperate to the fullest extent. Mrs. L. O. Mauldin of Greenville is the Acting President of the Woman's Auxiliary of the State Medical Association as well as President of the local organization at the present time.

The members of the scientific Committee all live in a short radius of Greenville and can easily meet together at frequent intervals. The local committees have all been appointed and have begun to function. It is probable that the plans for our next meeting are further along

at this writing than has ever hitherto been the case.

DEATH OF DR. BAXTER HAYNES

After several years of ill health Dr. Baxter Haynes of Spartanburg died November 18. Dr. Haynes had been a member of the State Board of Medical Examiners for many years and had been active in other capacities in organized medicine. He had contributed a number of articles to the medical press. He had given considerable study to pellagra and one of his notable articles related to the disease as he observed it in his own person. This paper was widely quoted in various medical journals of the United States. Dr. Haynes had served various hospitals in Cuba during his professional career. He was a genial companion and delighted in extending hospitality to those with whom he came in contact. A large circle of friends will miss him at the annual meetings of the State Medical Association.

THE SECRETARIES' CONFERENCE IN CHICAGO

One of the dynamic meetings of the world of medicine is that of the joint conference annually at the headquarter's building of the A. M. A. in Chicago of the Secretaries of State Medical Associations, Editors of State Medical Journals and the Board of Trustees and officers of the American Medical Association. The meeting was held this year November fourteenth and fifteenth. It probably is not too much to say that this was the most far reaching in its deliberations of any of the meetings in previous years. Economic medicine came in for a large share of the discussions. There is a growing tendency for leading members of the American profession to travel in other parts of the world and to study the conditions of practice elsewhere with the hope that as a result of these investigations there may come worthwhile suggestions for the improvement of the status of the profession in this country. There is apparent as reflected in this conference a desire to evolve an American plan in solving economic problems rather than blindly following that of some other country. The leaders of American thought and action in organized medicine come together at these annual meetings and it is invaluable as a stimulant to them to be present. It is a tremendous inspiration to spend two days in the atmosphere of the headquarters building of the American Medical Association with its five hundred employees, its incomparable journals, and vast net work of details of the various councils on health, medical education, pharmacy and chemistry investigations, etc. The plant, now perhaps the largest in the world devoted to such a purpose, must be ever increasing in floor space and indeed plans are already contemplated for a greatly enlarged building and equipment. It is not too much to hope that the new Council on Medical Economics authorized by the House of Delegates of the A. M. A. at Detroit this year will soon be appointed and begin to function. Such a council should be in position to cooperate in an admirable way with many other agencies now engaged in the study of the economic situation as it relates to the medical profession of this country. We have the greatest confidence in the leadership of the American Medical Association.

PRESIDENT'S PAGE

THE AIMS AND OBLIGATIONS OF ORGANIZED MEDICINE. II.

Science in Medicine versus the Art of Practise

Strictly speaking there is no such thing as the science of medicine. What we call medical science consists of the application of the sciences, of physics, of chemistry, of biology, and the several special parts of these sciences, in the various and constantly increasing divisions of medicine.

The time was when medicine consisted of the Art of Practise, when the sciences were undiscovered or were in a stage not applicable in practise by physicians.

As time has gone on, with the growth of scientific knowledge and as methods for its use have been developed, the practice of medicine has become less and less of an art and proportionately more and more of application of the sciences.

A statement that the proportion between the application of sciences and the practice of the art in medicine constitutes a mathematical calculation of the stage of progress of medicine may, I believe, be successfully defended. Such a statement must be based upon the hypothesis that all disease is constituted of biological abnormality, the correction of which must constitute the cure. That I believe to be correct.

In the medical day when disease was mystery and the practice of medicine steeped in superstition, all scientific knowledge was lacking and the treatment of the sick was wholly an art. As knowledge has accumulated diseases have, one by one, been transformed into concrete facts, to be counteracted by definite, if not actually specific, measures. We have been treating more and more the disease and less and less the patient.

The more scientific the physician of today, of any day, the more knowledge he possesses of the application of the sciences in his practice, the more successful he is in combatting disease. Unfortunately that does not always mean that he is more successful in the medical industry, although usually he is and in the future this will be always the case.

The stage of medical knowledge of the present time probably does not allow the use of the sciences in more than fifty per cent. of practise. The physician who has developed the art of controlling sick people, the art of practise, still has a tremendous advantage with the large bulk of the general population.

In consequence of the deficiences of knowledge of the biological facts of many diseases the most successful practitioner in most major divisions of medicine will still leaven the practice of scientific medicine with a large portion of the art. This is the part of practice at which many men of highly developed conscience balk; this is the reason why some will not do general practice, and why some of our most able physicians are overshadowed in popularity by unscientific men. The art is difficult to distinguish from artifice.

However, one who would practice medicine would do best to face conditions as they are, the fact that as yet and perhaps always there will be the necessity of the use of the art in handling sick people. The trouble in practice seems to be that physicians have the common human handicap of failing to strike a proper balance, of failing to attain the happy medium.

The Art of Practice converges so closely upon charlatanry that its cultivation often leads over the line of separation, if there is a line. In fact there are a great many successful practitioners of the art who are no more than quacks sheltered within the ranks of regular reputable physicians. This merits the attention of a future discussion.

Science in medicine means precision diagnosis and specific therapy. In some diseases, in some fields of medicine, the day of precision has come. In neoplastic diseases precision diagnosis is being accomplished; specific therapy will follow. In many other fields we have at hand measures of precision which are not always used as they might be. Unless and until they are used the practice of medicine remains at best an art. As they increase and are increasingly used it becomes applied science.

(CONTINUED ON PAGE 285)

ORIGINAL ARTICLES

*DIAGNOSIS AND TREATMENT OF COMMON SKIN CONDITIONS

By J. R. Allison, M. D., Columbia, S. C.

The diagnosis and treatment of common skin diseases would seem to be a subject well known to the average physician; it is a fact, however, that a general knowledge of the common Dermatoses and their treatment is an accomplishment that very few physicians have. On this supposition I am confining my remarks to certain common skin conditions and certain well accepted principles of treatment.

The skin is a complete organ of the body, the chief functions of which are protection, elimination and heat regulation. Some of the common skin conditions are simply physiological and not pathological disturbances of these functions. The skin in performing its normal unction bathes itself with oil and perspiration from special glands. In certain instances people are born with insufficient oil glands causing a tendency to dry skin during their whole lives. Where they are born with a complete absence of oil glands a condition develops called Ichthyosis—so-called fish scale skin disease. Sedentary life, frequent bathing and steam-heated houses aggravate Ichthyotic and Pre-ichthyotic conditions causing dry, scaly eczemas, itching skins, and in old age chronic, atrophic, senile Dermatitis. I have classified these conditions under the heading of Bath-Dermatitis, and my records show over one hundred and fifty cases. The majority of cases have not been treated properly. Patients suffering from Bath-Dermatitis very frequently consult their physician and are given irritating ointments, alcoholic and drying lotions. To illustrate, I saw an old gentleman simply covered with Calcamine lotion and powders to relieve an itching due to dry skin. He was quite surprised when I prescribed only olive oil, and assured him that within one week he would be well. The primary thought in the treatment of all dry, scaly conditions, especially in elderly individuals, should be "Will Gland oils cure this condition?" A nice preparation to use is equal parts of olive oil and lime water, and instruct your patients to bathe less frequently.

While there are many Dermatoses associated with dry skin, the opposite, excessive secretion of oil is also the basis of another classification of Dermatoses. Seborrhœa is the name applied to excessive oily secretion of the skin, and Seborrhœic Dermatitis is the name applied to this condition when the oil has caused an inflammation of the skin. Seborrhœa Oleosa of the scalp with excessive dandruff may cause a spreading Dermatitis on the face, neck and chest. Such conditions are cured by simply treating the scalp and never by treating the spreading disease itself. Acne Vulgaris, the pimply face of adolescence, has its origin in Seborrhœa. The causes of acne are numerous, and it often requires a great deal of study to determine the exact cause; yet, whatever the cause, local treatment with alcoholic and astringent lotions, X-ray and the avoidance of all forms of cold cream and other ointments are indicated. Washing with soap and water instead of using cold cream, and the application of the above lotions would be far better for the average young girl than the fancy and well-advertised cosmetic preparations used by so many of them to the detriment of their complexions. Some forms of Intertrigo, a Dermatitis found where opposing skin surfaces come in contact, some types of Pruritis Ani and many other Dermatoses are due to excessive oil and should be treated with lotions as described above.

I have thus given you two principles to bear in mind in the treatment of skin conditions. Whether the skin is dry or oily, the proper determination of this simple point is at least 50% of your successful treatment. The sweat glands and their influence on

*Read before the Medical Society of Eastern South Carolina, Myrtle Beach, S. C., July 17, 1930.

numerous Dermatoses is even more important. Hyperhidrosis is the name given to excessive secretion of the sweat glands. An important anatomical point to bring out at this place is that the sweat glands use the same opening on the skin as the oil glands. The majority of acute Dermatoses in hot climates like South Carolina are closely associated with Hyperhidrosis; there are many rare skin diseases due to and closely associated with Hyperhidrosis but these will not be described here. We are interested in the influence of Hyperhidrosis on the common Dermatoses. Excessive Hyperhidrosis may cause a mild, diffuse vesiculation on the hands and feet; you have seen many such cases come in hot weather or after undue exertion and exposure. This simple type of vesiculation is a normal, physiological re-action to the excessive perspiration. Such conditions should not be treated with ointments or irritating substances. You should aid the skin to rid itself of this excessive secretion by the application of alcoholic and astringent lotions. This simple vesiculation and hyperhidrotic skin is more subject to infection and irritation; for that reason fungus infection, staphylococcus infection and the plant Dermatoses are more common in hyperhidrotic individuals.

Many staphylococci are normal habitants of the skin; they secure entrance through insect bites, excoriations and vesiculations. We, therefore, expect to see Impetigo, which is caused by a staphylococci in hyperhidrotic individuals. A good illustration of this principle is the frequency in which we find staphylococcus infection of the bearded region in patients who perspire a great deal. The perspiration around the hair follicles macerates the tissue, and allows the entrance of the staphylococci into the beard, causing a staphylococcus sycosis of the bearded region. Impetigo is, of course more common in children in the summer time due to their lessened resistance, tender skin, and the frequency in which the skin is broken. The treatment of Impetigo is ammoniated mercury ointment. Many of you do not know that the application of ammoniated mercury on top of thick crusts and scabs will not cure Impetigo but will allow the organism to bury itself deeper and deeper into the skin. The skin in all cases of Impetigo should be washed thoroughly with soap and water until the sores are open and raw, and then 10% ammoniated mercury ointment thoroughly rubbed in three or four times daily. If you do not cure Impetigo in three days, there is something wrong with your treatment. A good preventive measure for children in the summer time is the application of mercurochrome; it has some virtue and the picture is at least impressive. Mercurochrome, however, will not cure Impetigo.

Hyperhidrosis is the most predisposing frequent cause of Fungus infection of the hands and feet. Very few people in this climate who have sweaty hands and feet are free from Fungus infection. Many of the fungi exist normally on the skin and become pathogenic in the presence of severe vesiculation. The best preventive for fungus infections of the hands and feet, especially of the feet, is alcohol, sulphur lotions and very weak iodine applications. The ordinary tincture of iodine is contra-indicated in practically all skin diseases. The skin can only be painted once with tincture of iodine, and in the treatment of skin diseases you should choose a remedy that can be used frequently over a considerable period of time. White socks, ventilated shoes and the avoidance of all forms of powders are excellent preventives for fungus infection of the feet, also good treatment for hyperhidrosis. Your method of attack then in all forms of fungi should be drainage, cleanliness, exposure to air and the avoidance of occlusive dressing. Some forms of fungus infection require keratolytic ointments, that is, ointments that will destroy and scale off the epidermis or portions of it; the best keratolytic ointments contain salicylic and benzoic acids.

Some years ago Arthur Whitfield of London began using an ointment containing 6% Salicyli and 12% Benzoic acid in Lanolin and Petrolatum. Later White of Boston added ½ of 1% Thymol, and Fordyce of New York added 30 grains of sulphur to the ounce. This preparation has been used generally by dermatologists with considerable success in obstinate fungus infections. Recently one of our enterprising pharmaceutical houses put this preparation on the market

under the name of Karolysin. Karolysin is a dangerous preparation, and should be used only under the direction of a physician. I know of several instances where rather severe inflammations have been caused by the purchase of this ointment from the druggist. The application of Karolysin to a Dermatitis Venenata, which might be mistaken for an acute fungus, would cause severe damage to the skin. There is no efficacious treatment for any type of fungus infection which is mild and soothing. All of these infections require strong, anti-parasiticide applications. A certain amount of judgment must be used, however, in the application of any of these preparations. The strength of the ointment or lotion, the individual—whether young or old—whether the skin is tender and exposed or protected, all have their place in the selection of the preparation to be used. A tough, callus foot might require an ointment three or four times as strong as could be applied to a child's skin or to an area subjected to irritation. No hard and fast rule can be laid down in the treatment; one can, however, seldom go wrong by applying wet dressings or strong Magnesium Sulphate or weak Bichlorid to fungus infections where there is secondary staphylococcus infection. I realize this is a very superficial description of fungus infections, but it is not a subject we could cover adequately in a paper of this nature. Before leaving the subject I might add that the term "Fungus Infection" covers all types of Ringworm, Mycotic Infections, Epidermophytosis and Tineas. These terms are practically interchangeable.

In the consideration of Dermatitis Venenata, which is the name applied to all inflammations of the skin due to plants and pollens, we have an entirely different condition to deal with from fungus infection. It is important that you clearly differentiate these two conditions. Dermatitis Venenata is an inflammation of the skin; the skin is highly sensitive and already irritated. It is acute, rapidly spreading condition with vesicles and often bullæ, oozing, usually on exposed surfaces and very superficial in character. Fungus infections on the other hand are more localized, progress slowly, have history of quiescent periods of acute exacerbation, and are characterized by deep-seated, multilocular vesicles and pustules. The secondary infection in Dermatitis Venenata on the other hand usually resembles Impetigo, and should not be confused with fungi. The history and location of the condition will often aid you in the diagnosis.

The treatment of Dermatitis Venenata is entirely local except in certain instances where vaccine can be made to desensitize. I believe Ivyol is efficacious in the treatment and preventive of poison oak. It is essential for you to bear in mind always that even the slightest irritation to Dermatitis Venenata is not good treatment. Many of the old forms of treatment of poison oak like lead water and opium and solutions of Grindelia Robusta, and many others are irritating; they relieve itching but probably do not hasten cure. You will find saturated solution of Magnesium Sulphate the best application in very acute conditions, and astringent lotions in the mild conditions. Magnesium Sulphate is a very valuable remedy in skin diseases. It is never contra-indicated when properly applied. I believe it will always control cellulitis and secondary infection. Being properly applied in my opinion is a wet dressing with bath towels entirely incased in rubber sheets almost entirely free from the atmosphere. It should be cold. Such a wet dressing can be applied to the skin with safety for three days, and I have personally never seen a cellulitis spread under this treatment or blood poison develop.

*INFANT MORTALITY IN SOUTH CAROLINA

By Thomas D. Dotterer, M. D. Columbia, S. C.

The South Carolina Pediatric Association made a special feature of infant mortality in our State, and we feel certain that this Association will assist in reducing the present high infant death rate.

The problem of high infant mortality in South Carolina has been a matter of extreme interest as well as a regret when we consider that the death rate here is higher than in any other state. It is time for us to "put our shoulders to the wheel" and find out why this high infant mortality prevails. This is a tremendous task, but it can be accomplished by all working together so that these children who die each year may have a fair opportunity to become useful citizens and lower the death rate.

It is needless to say that the large Negro population has much to do with this high infant morta ity when we realize that in 1928, 80.1 white babies died per 1000 births; and 115.9 colored per 1000 births. However, this is not a main factor.

According to the Bureau of Vital Statistics, infant mortality is slightly lower for the year 1929 by six hundred and thirteen, but to recall that 4,149 babies died during 1928, we cannot allow this tragedy to continue without a complete survey. It is true that infant mortality varies from year to year, but the variation is quite small. A few statistics will give an idea why these infants die, and it must not be taken lightly but seriously and earnestly with a determination that it will not happen again.

STATISTICS

Endemic, Epidemic and Infectious Diseases	1,014
Measles	144
Scarlet Fever	2
Whooping Cough	152
Diphtheria	63
Dysentery	139
Diarrhœa (Enteritis) under 2 yrs.	775
Meningococcic Meningitis	1
Tetanus	15
Tuber ulosis (All Forms)	38
Syphilis	73
Diseases of Thymus Gland	15
Diseases of Respiratory System	674
Broncho-Pneumonia	245
Lobar-Pneumonia	157
Congenital Hydrocephalus	16
Prematurity	866
Injury at Birth	114
Other Diseases peculiar to early Infancy	93
Accidental	92
Mechanical Suffocation	30
Ill-Defined Diseases	148

We are amazed at some of the terminology of diseases revealed in this report and a few points of interest to all, whether you practice Pediatrics or any of the other specialties.

There were fifteen deaths from diseases of the Thymus Gland. Did these deaths occur from abnormal conditions of the Thymus Gland, or abscess, or from malignancy? Other diseases of the Thymus Gland are atrophy before the physiological time and hypertrophy of the gland.

Another example of misleading and incorrect terminology is one hundred and fourteen deaths from Injury at Birth. This constitutes injuries of the eyes, of nerves, whether it be traumatic or non-traumatic, injury of the abdomen, gastro-intestinal tract, kidney, rectum, tendons and testicles.

Other Diseases Peculiar to Early Infancy accounted for ninety-three deaths. How are we to know the real cause of death? At present, there are no means of finding out, but in the future, it should not come to pass.

Last, but not least—there were one hundred and forty-eight Ill-Defined Diseases. This in itself is sufficient reason for more and better autopsies, and we hope that in the near future, this figure may be reduced to zero.

Lack of interest by physicians in dealing with pregnant women, infancy and young ch ldren is eminent. We must be w lling to give more time and patience and assist mothers in their many perplexed problems which seem trivial to us. Encourage them day by day and be certain they understand your directions in writing.

*Read before the South Carolina Medical Association, Florence, S. C., May 7, 1930.

There are too many babies who do not receive breast milk when they should be nursing. Be consistent in advising the mother properly how to nurse her baby, and do not be satisfied to tell her to "follow the directions on the can" or tell her to wean the baby without a definite reason. If the chi d is to be weaned, we must in every case write complete directions how to prepare the formula.

Poverty and ignorance play a large role and there is much to be accomplihed by education. Prenatal and well baby clinics must be established and public interest aroused. The general hospitals must pay more attention to Pediatrics, and parents must be educated to take their sick child early to the doctor in order that time wil not be lost. 1

There should be better cooperation between the average practitioner and the pediatrician. Keep in mind that it is for the good of the patient and the sick child shown every possible consideration.

Doctors who practice obstetrics should be prepared to give proper care to prenatal cases, to mothers, and to new-born children. They should be prepared to meet any emergency that may arise and demand able assistance whether the baby is to be born in the well-equipped hospital or in the rural district. The obstetrician as well as the doctor who paves the way for future manhood or womanhood, should give due thought to see that his patients receive the best possible medical or surgical attention.

One serious factor in infant mortality is the misuse of a large proportion of laxatives. These infants are malnourished and marasmic, and their meager resistance is lowered by drastic purging. If water is supplied in these little patients instead of giving unnecessary or harmful laxatives, many lives may be spared.

In conclusion, we have good doctors in South Carolina, but it is apparent that a large percentage are not concerned about infant mortality. From the statistical report given today, it is time to collect our thoughts about the high mortality rate and form plans to improve conditions.

The South Carolina Medical Association has always been interested in the welfare of infants and children, but the average physician is interested in the care of infants in his locality, whereas, he should take an interest more collectively—including the entire state.

The Bureau of Vital Statistics is an important department of the State Board of Health, and let us see to it that the report for 1930 will be a revelation in regard to the infant mortality in South Carolina.

DISCUSSION

Dr. Ben F. Wyman, Columbia, S. C.: I have listened with great interest to the very fine paper of the essayist and wish to congratulate him.

Infant Mortality of course is the number of infants who are born alive and yet die under one year of age. Under this heading we do not include: (1) Stillbirths or infants born dead, (2) Premature births of dead infants, (3) Miscarriages, (4) Abortions—and we could consider those prospective infants who have been denied the right to be conceived.

Ballantyne contends that the cases of abortion, miscarriage, premature dead infants and infants of full term born dead should be considered in any discussion of the cause and effect, as well as corrective measures dealing with this question. If for example you consider that we have one hundred deaths out of one thousand live births, we have a mortality rate of (100) one hundred. If we take into consideration the cases of abortion, miscarriage, premature deaths and stillbirths we can reasonably say that we have another one hundred deaths or a total death rate of 200 per 1000 conceptions. Here I use the word conception rather than births.

Dr. J. A. Hayne, in his excellent paper the "Rights of the Child" has clearly proven that a child has (1) the right to be conceived, (2) of healthy parents, (3) under the proper care and supervision of a well qualified physician and (4) that it has the right of its mothers milk. And yet in many instances the infant is denied just these reasonable and essential rights.

Infant Mortality is steadily declining, Queen Anne of England gave birth to nineteen children and only one lived to be twelve (12) years of of age. As someone has said "They did not expect to raise them all". But the neonatal deaths, or deaths of infants under one (1) month of age has not declined. This first month of life is "No man land. It is the borderland between abstetics and pediatrics. It is the borderland between mother welfare and child welfare activities. Perhaps a course in motherhood craft would help." To show how urgent this first month of life is—out of one (100) hundred deaths per one (1000) thousand live births in the first year about forty (40) occur in the first month, and most of these occur in the first week of life.

The old excuse that the lives lost before and after births are those of "Weeds" can no longer hold good. The very sharp and marked reduction in deaths after one month discloses this error.

In further discussing this subject I wish to follow Ballantyne's classification of the cause of neonatal mortality as follows:

I Antinatal or causes operating before birth.

II Intranatal or causes operating during birth.

III Neonatal or causes operating after birth.

I. Under the heading of Antinatal or causes operating before birth we can further subdivide:

a. Preconceptional or causes operating before conception.

b. Intraconceptional or causes operating during conception.

c. Post conceptional or causes operating after conception.

A. Causes operating **before conception**, to cause neonatal deaths may seem a long ways back, but just consider briefly the following:

1. Ancentral hygiene or Eugenics.
2. Parental (not prenatal) hygiene.

"It aims at insuring health in the lives of the father and mother up to the actual meeting of the reproductive cells. It begins in infancy, continues in childhood and adolescence, and is maintained in the adult existence." For example consider the effect of syphilis, Gonorrhoea and T. B.. Rickets in the infancy of the mother, during her infancy, very frequently flattens her pelves and hence often means surgical procedures or difficult and prolonged labor.

B. Causes operating during conception or intraconceptional are:

(1) Prenuptial or post nuptial debility, fatigue, or even sexual excess has some bearing.

(2) What effect has drunkenness on the cells of reproduction?

(3) Syphilis and gonorrhoea must be considered.

C. Causes operating **post-conceptional** or after conception are of the utmost importance. Here we really enter the prenatal period of life. Here applies all the questions of what to do about the pregnant woman. Here is the period of intra uterine life. Especial attention should be called to

(1) Syphilis and gonorrhoea.
(2) Personal hygiene of mother.
(3) Medical care of mother.
(4) Toxemias of pregnancy.
(5) Prevention of Prematurity.

11. In the foregoing we have considered the mother before pregnancy and the mother and foetus after pregnancy, we have just mentioned the intra-uterine life. Now we must briefly consider the **birth of the baby** or **intranatal measures.**

Intranatal or birth measure can be considered as,

a. Causes operating before birth, antinatal.

b. Causes operating during birth, Intranatal.

A. The causes operating before birth are simply prenatal measures. We have already mentioned syphilis, personal hygiene of mother, medical care and supervision of the pregnant woman. Thus many diseased or deformed foetuses will be prevented. In some cases ricketic pelvices will be avoided. The whole picture may be changed.

B. The causes operating intranatal or during birth deal largely with causes tranneatic-operative during the course of labor whether spontaneous or instrumental. We can divide these causes as follows: By R. A. Bolt.

(1) Direct or immediate causes.

1. Trauma. Mechanical factors.
2. Undue compression of the head. Sudden release of molded head.
3. Unequal or too sudden change in pressure.
4. Unskillful application of instruments. High forceps.
5. Internal podalic version and rapid extraction.
6. Extraction of shoulders and after coming head in breech cases.
7. Injudicious use of petuitrin and ergot in early stages of labor.
8. Rough handling of child during resuscitation.

(2) Contributing causes (often difficult to separate from direct).

1. Pelvic abnormalities—rachitic, generally contracted, exostoses.
2. Abnormal presentations, especially breech.
3. Maternal or fetal dystocia due to the above causes and others.
4. Hemorrhagic diathesis. Delayed coagulation time.
5. Precipitate labors. Premature rupture of membranes.
6. Multiple births, especially prematures.
7. Rigid cervix and unyielding perineum.

(3) Predisposing causes (difficult to separate from contributing).

1. Prematurity. See causes mentioned under Prematurity, page 9.
2. Syphilis.
3. Asphyxia. Often a result of injury rather than a cause.
4. Toxemias of pregnancy, especially eclampsia.
5. Acute infections and intoxications of mother.

While it is fully recognized that birth injuries are not always the fault of the attendant at birth it is evident that many of the causes leading to such injury may be prevented if proper prenatal care and skilled obstetrical service are given.

Prenatal care does not guarantee a safe delivery at the hands of a careless or unskilled physician.

III. We now come to our final classification **Neo-**

natal deaths. We have seen that this question could be considered from many angles as:

a. Antinatal measures.

b. Intranatal measures.

And now we will add

C. Neonatal measures.

Our whole discussion has been an attempt to show the influence of the antinatal and intra natal periods on the new born. We have also attempted to evidence the effect of proper prenatal care and preventive abstetrics during the birth of the infant and I believe we must all agree that many factors enter into the welfare of the matter and infant up to the time it can be registered as a **live birth.**

"Let us just briefly consider finally the cause of so many neonatal deaths. They divide themselves roughly into three groups, (1) those which begin to act in antenatal life, such as malformations, placental disease, infections (especially syphilis) and morbid states transmitted from the parents and especially from and through the mother; (2) those which emerge in the act of birth, such as birth injuries or tranmatisms, prematurity and birth asphyxias; (3) and those which arise after birth from the impact of external conditions, such as microbic infections through the cord or lungs or digestive systems, deficient or erroneous feedings, careless nursing, bad housing and the hundred and one ills which the flesh is (after birth) heir to."

The U. S. birth registration area 1915-1926 lists the neonatal mortality rates as follows:

All causes		37.9
Premature births	17.	
Congenital malformations	4.6	
Injury at birth	4.8	
Congenital debility	1.9	
Unknown causes	3.9	
Diseases	5.7	
	37.9	

If we deduct the death from diseases and unknown causes we still have 28.3 which we know are causes by factors and conditions operating in intra uterine or prenatal life, and those operating during birth.

We have considered the problem in one aspect or phrase. Now let us consider the problem of the remedy.

The following procedures should be considered:

1. Modern preventive medicine.

(a) "Skilled and judicious obstetrics is the sine qua non of the prevention of Neonatal mortality."

(b) More consultations.

(c) Routine Wassermann and Kahn tests.

(d) The need for real prenatal care.

(e) The realization that obstetrics is an art requiring the greatest preparation, study and skill.

2. Modern public health methods.

(a) Prenatal clinics or maternity centers conducted by physicians.

(b) Facilities for public health nursing for the indigent.

(c) Proper solution of the midwife question.

(d) Education of the public to demand better obstetrical practices and as to the importance of adequate prenatal care, skilled obstetrics and hospitalization.

(e) Better birth registration.

(f) Follow up of all stillbirths and neonatal deaths with determination of cause, if possible.

3. More complete and accurate vital statistics. More exact classifications as to time, causation and contributary causes.

4. Maternal benefits as health and sickness insurance.

5. Research—

There is need for a number of carefully planned community studies of the intimate conditions surrounding maternity and infancy.

(a) Complete study of pregnancy in the light of whole family background.

(b) More complete records of pregnancy and its outcome.

(c) Painstaking and prolonged observation of cases.

(d) More careful autopsy study of dead foetuses and neonatal deaths.

6. Parental and preparental education. Without the cooperation and education of the parents as to the importance of obstetrical care very little of permanent value can be accomplished.

The following points should be stressed:

a. Importance of early and continued prenatal care.

b. Choice of a physician of good judgment and obstetrical skill.

c. Importance of prevention of acute communicable diseases and immunization for some of them.

d. Importance of prevention of syphilis. Desirability of Wasserman and Kohn tests as a routine procedure.

e. Demand for adequate hospital care.

f. Dispelling notion that every labor should be hastened, and that version and extraction, forceps delivery, and cesarian section can meet all exegencies.

g. Placing before parents results of good work done by community organizations for maternity care.

h. Urging upon parents the importance of some form of insurance to take care of emergencies and to meet extra demands upon mother at the time of childbirth and thereafter.

In this very inadequate discussion we believe that the way has been shown to prevent so many of our babies drifting "Away into the shadowy river that flows forever to the unknown sea."

Dr. D. LeSesne Smith, Spartanburg: I was present last year at the meeting of the Medical

Society of the State of North Carolina, when this subject (in regard to North Carolina) was discussed; and I want to say to the South Carolina Medical Association that one pleasing thing came out. That is, we are better off, as regards infant mortality, than North Carolina. It was very gratifying to me from that standpoint, because we hear so much of what North Carolina is doing, and it is doing so many things in a bigger and better way than we are. It seemed that the obstetrician was blamed for the high infant mortality; the pediatricians there put the blame on him; so it seems that the obstetricians are the ones that should discuss this paper, and not the pediatricians.

CONGENITAL PYLORIC STENOSIS*

By D. J. Barton, M.D., Anderson, S. C.

Synonyms—

Hypertrophic Stenosis Congenital—This disease was first described by Bradley, in 1788 and later it was brought to the attention of the Medical profession by Hierschsprung in 1888.

Etiology—

There is a variation of opinion as to the cause of this disease, there has been several different theories advanced, The Neoplastic Theory—There are those who consider the condition to be of the nature of a benign tumor; a tumor mass of muscle is sometimes found, very hard in consistency. Hyperadrenalism—Pirie considers this a cause of pyloric hypertrophy by creating, first of all, pancreatic and pyloric insufficiency, which accentuate pyloric closure. Others believing that it is Pyloro Spasm causing hypertrophy of the Pylorus and thickening of the mucous membrane, however, some believing there is a hypertrophy causing a Pyloro Spasm. Spasm certainly plays an important part in the production of symptoms; but to regard this condition as one essential of muscular spasm seems to be erroneous. There is always a thickening of the muscle of the pylorus causing a Stenosis of the ring, which a very fine probe cannot be passed through. While the normal Pylorus will usually admit a No. 21 sound, French scale. In these cases you will always find dilatation of stomach sometimes extending below the umbilicus. There is always dilatation of stomach sometimes extending below the umbilicus. The Pylorus looks at autopsy like a tumor about the size of a peanut with a white, shining appearance, however this disease is certainly affected with Pyloro Spasm. There is also a thickening of the mucous coat.

Symptoms—

Symptoms of Pyloric Stenosis is sometimes of a gradual onset and on the other hand it may be so abrupt that the mother can give the exact time symptoms began. This disease usually occurring from the eighth day to the eighth week after birth, very seldom beginning the first two weeks after birth. About 80 per cent occurring in male infants. The first signs noticed is vomiting, at first occasionally and soon habitually, coming on immediately after taking nourishment and of a projectile nature, loss of weight, the scales showing a loss of one to two ounces a day, obstinate constipation is the rule. It is due to the fact that so much of the food taken is vomited, suppression of urine owing to the loss of fluid by vomiting. Usually no temperature, tongue clean, breath sweet, and is not associated with any kind of indigestion, change in diet having no affect upon it.

Diagnosis—

The diagnosis of Pyloric Stenosis of infancy is usually easy after a few days observation. There are three main diagnostic features on examination; peristaltic waves may be seen, projectile vomiting, delayed emptying time. If the patient is undressed and placed in a good light peristaltic waves are seen immediately after taking nourishment, you should not expect to see them if the stomach is empty. These waves are seen moving slowly from left to right. First tumor appearing on left side, passing toward the right. Usually disappearing just beyond the median line, coming on in successive waves. Tumor may be felt often times by skillful palpator, if stomach is not disturbed with gas or no enlargement of liver. There is delayed emptying time of the stomach, if obstruction is only partial and whole amount of food not being vomited. In healthy infants the stomach is found empty at the end of three hours, sometimes at the end of two hours after nourishment is taken. But if stenosis is present, food in large amount is found sometimes 4 to 8 hours after food is taken unless vomiting

*Read before the Anderson County Medical Society, Anderson, S. C., October 8, 1930.

has occurred. The vomiting in these cases is projectile and may be thrown 3 or 4 feet away, often coming through the nose. The vomited matters usually contains the food, often but little changed. This coming on immediately after food is taken, and sometimes while taking food, often whole amount. There is always suppression of urine due to the lack of fluid in the system. The condition might be confused with that of cerebral disease on account of the projectile vomiting and chronic constipation. However the first symptoms mentioned above will distinguish between the two. X-Ray is a great help in this diagnosis when we do not have complete obstruction.

Prognosis—

The prognosis of this disease is usually considered a very serious one, if not properly treated in time, of course this is due to the severity of the case or the patient is likely to die of some other intercurrent disease. The mortality in these cases under the old method of treatment was about 50 per cent. In the operative cases the mortality is about 20 percent, when operation is made in the earliest part of the disease. In cases admitted later in the disease the prognosis is not as good. The prognosis depends most of all upon the condition of the child at time of operation. This is due chiefly by the duration of the symptoms and the amount of weight lost. No condition should be considered hopeless; we have seen a child recover whose weight at the time of operation was only four and quarter pounds.

In cases not operated on complete recovery from symptoms may result, though the tumor and active gastric peristalsis may persist for seven or eight months. Whether this condition may give trouble in later life cannot yet be definitely stated. The hypertrophy is certainly very slow in disappearing. A tumor has been found at autopsy in children dying of intercurrent disease as long as six months after recovery from all symptoms. Quotation Holt and Howland. This is quotation of 162 consecutive operations done at the Babies Hospital, the mortality 19.6 per cent. Of 115 cases in which the symptoms had lasted four weeks or less the mortality after operation was 13 per cent; of 57 in the same series in which symptoms had lasted over four weeks it was 35 per cent. Of 76 cases, in which less than 20 per cent of the weight had been lost the mortality was 6.6 per cent; of 51, in which more than 20 per cent had been lost, it was 58 per cent.

CASE REPORT—

L.B., a girl, age 2 months, weight 7 pounds, this baby was brought to my office, July 13, 1929, for examination. This was breast fed baby.

Examination—Family history not obtained, head and neck negative, temp. normal, chest—some rosary on ribs, child looks rachitic, Cardio-Vascular—negative, abdomen—abnormal in shape, enlarged, peristaltic waves very visible moving from left to right, tumor can be felt to the right of the median line in abdomen, vomiting projectile, coming through nose, vomiting occurs immediately after food is taken does not retain any food at all, constipated all the time, baby retained nourishment first two weeks of life, since the third week of life has been vomiting after each feeding. Birth weight was nine (9) pounds. A fluoro scopic examination was made by Dr. Wrenn, it was given a barium meal and was looked at under screen as soon as the barium reached the pylorus it bounced back like a ball and immediately vomited. Diagnosis would have been easily made but wanted to see how stomach looked under X-ray.

DIAGNOSIS—Pyloric Stenosis.

Treatment given was the following: Prescription was given 1/1000 Sol. Atropin. Atropin gr. 1—Water oz. 2, one drop with each feeding, orange juice given, cod liver-oil 20 drops night and morning. Milk of Magnesia 15 drops night and morning for constipation. Second visit—atropin solution increased to two (2) drops with each feeding (which was every three hours) put on thick cereal feeding (cream of wheat) cooked thoroughly and mashed through a fine sieve and given two teaspoonfuls before each nursing. Third visit—Baby vomiting smaller amount, rests better. Fourth visit—Is still vomiting after each nursing but in smaller amounts. Fifth visit—Baby on thick cereal has gained one--eighth ounce; bowels does not move unless enema is given, vomiting has decreased. Sixth visit—Baby has gained one-half ounce, orange juice discontinued, (didn't agree with baby so well) has had nor-

mal bowel movements since last visit to office 2 days ago. Patient gradually improving. Last visit—Baby improved, gaining in weight and does not vomit at all, this being the last visit on account of fathers illness could not come back to office for treatment. Last report baby was doing well this being two months later.

TREATMENT—

Treatment may be grouped under two heads, medical and surgical. Medical Treatment—There are many who advocate medical treatment alone and say that operations are rarely necessary; nevertheless a continuance of medical treatment is warranted only if the loss of weight is less than 20 per cent. If after ten days, the treatment is unsatisfactory, operation is indicated. The usual medical treatment adopted in these cases consists in the following: Gastric lavage is recommended by many twice per day or as often as case may indicate, using warm normal saline or a 1 per cent, sodium bicarbonate solution by means of a soft rubber catheter and funnel.

Feeding—In feeding these cases, the thick cereal feeding seems to be the feeding of choice. Dr. William P. Lucas, University of Cal. hospital, Dept.— of pediatrics says—he feels in early cases it is perfectly justifiable to try modern methods of infant feeding, particularly the application of thick cereal feeding. If these feedings are closely observed and the weight and the stools of the child carefully watched a fairly definite estimate of their value can be made within a very few days, especially if the feedings are accompanied by the administration of atropin. Most cases of true spasm of the Pylorus will be corrected by atropin treatment in conjunction with thick cereal feedings. Our plan of treatment has been to give 1/400 gr. of atropin half an hour to twenty minutes before each feeding, following this by washing out the stomach with a weak soda bicarbonate solution and then feeding from 2 to 3 ounces of a 16 percent fine rice cereal which has been cooked in a double boiler an hour and a half to two hours. This should be of sufficient thickness to form a jelly on standing, but when warmed and mixed with an equal quantity of breast milk will pass through a "hygea" or a breast type of nipple with 4 inch slit in the nipple. The infant is placed in the usual position and the nurse with her left hand holds the large nipple over the infants mouth. The cereal is slowly poured into the nipple and with a spoon the nurse gently presses it through the slit as the child sucks. It is better to divide the feeding into two portions, with half of it standing in hot water to keep it fluid, and changing the nipples just as soon as the feedings begin to thicken and shows difficulty in passing through the nipple. The dietetic treatment, first suggested by McClure for nervous vomiting, and introduced into the treatment of pyloric stenosis by Sauer, consists of the use of thick cereal. The formula for this cereal is as follows:

Skimmed milk, 9 ounces.
Water, 12 ounces.
Farina or rice flour, 6 tablespoonsful.
Dextri maltose, 3 tablespoons.

Boil an hour or more in a covered double boiler until thick.

One can, of course, modify this paste as he sees fit. Sauer advises particular attention to the constituency of the food. He believes that it should be so thick that when held on a teaspoon it does not fall off. This feeding may be given alternately with breast feeding if possible.

Enemata should be given regularly, and after them, one may use rectal injections of saline or a glucose solution, 3 per cent.

It is very doubtful if any drugs are of much avail. Alkalies, bismuth, gastric ferments, belladona and atropin have all been employed with more or less success as has also opium in small quantities. Bromids are probably useless. Of all the drugs that have been recommended, ATROPIN is, perhaps, the only one from which beneficial results can be expected. Atropin is antispasmodic, as well as astringent and has an inhibitory effect upon the gastric secretion. It can be given in the form of drops added to the feedings, from 2 to 10 drops of 1-1000 solution being used in the twenty-four hours.

There are many who advocate operation at once after diagnosis is made, it saves much time and can be cured much more easily than that of medical treatment. I think the thick cereal feeding with atropin should be tried first, watch the developments of the case very close-

ly and if no improvement is shown or no gain in weight in two or three days patient should be operated on. Be on the alert and take these cases with fear and trembling that you do not wait too long for operation.

In conclusion to this paper, Dr. W. A. Mulherin, Augusta, Georgia, gives his opinion on the subject, "saying" he believes there are two conditions that exist in this trouble, one that is a true congenital hypertrophic stenosis that forces surgical treatment in the early weeks of life, the other a pyloric spasm that in the large majority of cases responds to belladonna medication and proper feeding—mainly thick cereal feeding. The former condition is rather rare, while the latter condition is of frequent occurrence.

To stress this point I might say that I have not met a case of pyloric obstruction that has required operative treatment, for the past two or three years. All have responded to belladonna and proper feeding.

The most important factor in handling these cases is to determine upon medical or surgical treatment. In a general way I would say, give every case the medical treatment first and resort to surgical treatment as a last resort. It has been, and is at present, my custom to use belladonna and give thick cereal feeding, and unless the baby is losing about one or two ounces a day I would temporize and they usually come out O. K.

If on the contrary a child is losing weight I would send the little patient into the Children's Hospital, and if the nurse under advice cannot prevent the child from losing weight, then I advise operative procedure—the Fredet Rhamstedt operation. We have been very successful with our operative cases, having lost only one out of some eight or ten cases.

As regards to prognosis, I believe we are lowering the mortality in this disease, seldom do we lose one of these little cases, by following out the above stated procedure.

In the treatment there is one important factor that I have found of value. It is to explain fully to the mother the nature of the case, drawing a diagram to exemplify it, and stressing the fact that these cases are necessarily of long duration, vomiting continuing off and on for some three to nine months. My experience with mothers has been that they are good sports if you will treat them as such, and will give you ample time to get results if the game is played fairly.

References: Drs. Jesse R. Gerstley and L. J. Wilhelmi of the Northwestern University Medical School. Medical Clinics of North America September, 1924. Dunn Pediatrics; Holt and Howland Pediatrics. From the system of Tices Practice of Medicine; C. F. Martin and R. H. Hardisty.

VEGETABLE FOREIGN BODIES IN THE LUNGS, A FEW RECENT CASES*

Wm. B. McWhorter, M.D., F.A.C.S., Anderson, S. C.

Being consulted by patients with foreign bodies in the lungs is not of every day occurrence with the average physician. It does occur with sufficient frequency, however, that the physician should be able to recognize the symptoms. The few cases here reported serve to illustrate the average case.

L.N.—Four year old boy inhaled water melon seed twelve hours ago. Came near suffocation at first. Has been coughing at intervals since. Mucous rales of asthmatic nature present and more pronounced on right side. A large watermelon seed was removed from right bronchus. Kept under observation twenty-four hours. Symptoms rapidly cleared up.

R.P.—Fifteen months old boy choked on grain corn three days ago. Labored breathing since with frequent coughing. Examination showed dulness right side and asthmatic mucous rales. X-ray picture indicated foreign body right bronchus. Fever present and child appeared sick. Evidently severe bronchitis and possibly pneumonia already present. Large grain corn removed from right bronchus. Patient died two days later with what family physician pronounced pneumonia.

E.C.—Two year old girl came near suffocation while eating peanuts two hours ago. Has had labored respiration since. Usual cough and asthmatic breath sounds present. Whole pea-

*Read by title at District Medical Meeting, Spartanburg, S. C., October 15, 1930.

nut removed from left bronchus. Quick recovery.

A.R.G.—Two year old girl choked while eating watermelon four days ago. Has been coughing and breathing hard since. Examination showed dullness and mucous rales right side chest. Patient had fever and labored breathing. A whole watermelon seed was removed from lower right bronchus. Patient appeared improved after operation but still some interference with breathing. Patient kept under observation. Several hours later breathing became more labored. Intubation performed. Tube removed next day but had to be replaced following night. Tube allowed to remain 48 hours after second intubation. It was then removed. Rapid recovery.

R.B.—One and one-half year old girl choked on apple one week ago. Has been breathing hard since. Examination shows labored respiration and rales both lungs. Temperature 101. Examination with laryngoscope shows edema larynx. Piece apple with peeling removed from right bronchus. Patient partially relieved but had to be intubated 24 hours later. Tube removed several times but had to be replaced each time until sixth day. Result complete recovery.

E.S.—Two year old boy inhaled watermelon seed one week ago. Attacks coughing and impaired respiration since. Chest examination shows dulness right side and asthmatic mucous rales. Diagnosis foreign body in right bronchus. Attempt made at removal but patient breathed so poorly that operation deferred. Father of child carried patient home a distance of thirty--five miles. Did not return. Family physician reported a year later that child suffered for a year with impaired breathing, irregular fever and severe chronic cough. At end of that time coughed whole watermelon seed up and since had made recovery.

I will conclude by stating that vegetable foreign bodies retained in the lungs longer than a few hours cause a severe laryngo-tracheo-bronchitis with more or less edema of larynx. This inflammation of the respiratory tract is readily visible with the laryngoscope. The indication is to remove such foreign bodies and the more quickly it is done the better the prognosis. After removal the patient should be kept under observation until laryngeal edema subsides. If the foreign body is not removed these cases have a long continued chronic bronchitis with cough and irregular fever often ending in pneumonia or lung abscess.

PRESIDENT'S PAGE

(Continued from Page 273)

Some years ago there was much discussion of the statement of a prominent physician that diagnosis under the best conditions existing was in substantial error in fifty per cent. No one succeeded in contradicting that statement.

I have taken the occasion to examine the records of the last two hundred autopsies in my service and I am much encouraged to find that the clinical diagnosis and post-mortem diagnosis agreed completely in 65 per cent, and that the clinical diagnosis was substantially correct, that is in regard to the important pathologic event, in 82 per cent, leaving only 18 per cent undiagnosed or incorrectly diagnosed. I was also interested to note that when an error was made it was either by virtue of lack of measures of precision or failure to use them.

This is a concrete illustration of the ever increasing application of the sciences in medicine, of the gradual displacement of the art. Medical history of the past and the trend of the present point to a future when probably most of what now constitutes the art of medical practice will be relegated to the shadows of the artifices or definitely to the spot-light of charlatanry.

SURGERY

Wm. H. Prioleau, M.D., Charleston, S. C.

POST MENOPAUSAL HAEMORRHAGE

The serious significance of post-menopausal bleeding is not always recognized. Too often it is considered a return of the menstrual flow, and valuable time is lost in undertaking proper treatment. In many cases not thoroughly examined the bleeding has been attributed to various indefinite etiological factors. In order to determine the usual causes of this condition, Mr. Herd of Liverpool has reviewed 100 cases and published his findings in the Summer number of 1930 of the Journal of Obstetrics and Gynecology of the British Empire—page 304.

In the cases reported there had been an interval of at least six months in which there was no bleeding. Only cases of uterine bleeding have been included, not lesions of the vagina and external genitalia. In every case a satisfactory diagnosis has been made, except those due to a so-called "senile endometritis."

Carcinoma of the cervix was found in 44 cases—(44 per cent). Ten of these had not menstruated for 15 years. There was nothing characteristic about the bleeding, except in a few cases it was very profuse after coitus or examination. The operability rate appears to have been high as many of the tumors were of the chronic slow-growing type.

Adenomatous polyps were the cause in sixteen cases. In four the bleeding was so severe as to cause constitutional symptoms.

Submucous fibromyomata were present in 7 cases. The haemorrhage was always slight, and although there were no other distinctive symptoms the diagnosis was straightforward. The source of bleeding was always in the capsule of a tumor, usually in an ulcerated or congested part of a polyp.

A few cases were due to ulceration from prolapse or the wearing of a pessary, or a simple infection of the cervix. These require no comment. Several cases were explained to be of mechanical origin, due to a tumor in the vicinity of the uterus.

In nearly all of the remaining twenty-two cases Curettage was necessary to establish a diagnosis. In no case did this procedure appear to do harm such as spreading an infection or a malignant tumor. Also in no case, judging from subsequent history, was a malignant tumor overlooked.

In three cases of pyometra there was a thin blood stained purulent discharge. Carcinoma of the body of the uterus was found in twelve cases: in some of these there was severe colicky pain. There were three cases of sarcoma of the body of the uterus.

"Senile endometritus," a rather uncertain condition, was diagnosed in three cases. These were apparently cured by curettage. However, in this type of case, should the bleeding continue a hysterectomy should be done.

The remaining cases were due to various causes among which are ovarian cyst-adenoma, primary and secondary carcinoma of the ovary, and torsion of the pedicle of an ovarian cyst.

The conclusions drawn support the view of the seriousness of post-menopausal haemorrhage. The majority of the cases present no difficulty in diagnosis, but in 20 percent the only satisfactory way of excluding the presence of malignant disease is by use of the curette. Until the presence of carcinoma of the body has been ruled out, the palliative treatment of non malignant conditions such as "senile endometritis is to be deprecated.

NERVOUS AND MENTAL DISEASES

E. L. Horger, M.D., State Hospital, Columbia, S. C.

THE SCHOOL CHILD

At this time of the year when thousands of children are returning to school and many are entering for the first time it might be advisable for the parents and those whose interests are involved to consider the following questions:

1. Is the child physically and mentally qualified to take up his work so that he may derive full benefit from his schooling?
2. Does he receive the proper food at home?
3. Does he have a suitable home environment?
4. Are the proper facilities maintained in the new environment for housing and teaching?
5. Do the teachers have a knowledge of mental health problems of childhood and are they capable of dealing with same?
6. Are school hours too long and is overwork permitted?

That the school system should assume a part in solving the mental health problems of the child is the opinion of Dr. A. J. Rosanoff. In his Manual of Psychiatry, sixth edition, he offers for the public school system fifteen suggestions for mental health activities. These are:

1. Group tests of intelligence for all pupils above the fourth grade.
2. Individual intelligence tests for all children in fourth grade and below.
3. Individual intelligence tests for those who have made a poor showing in the group test—the lowest 25 percent.
4. Physical examination of all children.
5. Survey of each class room for listing of children presenting nervous symptoms, behavior problems, or other difficulties not revealed by the intelligence tests and the physical examination.
6. Achievement tests for all children above the fourth grade.
7. Investigation of home conditions in cases presenting special problems.
8. Psychiatric examinations of selected children.
9. Correction of physical conditions; fitting glasses, removing tonsils and adenoids, repairing teeth, etc.
10. Correction of undernutrition—if necessary by providing milk and other food at cost or free.
11. Rapid promotion of superior children.
12. Adjustment room temporarily for children whose achievement quotient is found to be below 1.00.
13. Special rooms for subnormal children.
14. Twenty-four-hour schools for children presenting special problems that cannot readily be solved in their homes.
15. Transfer of markedly defective and epileptic children to state institutions.

If these suggestions are carried out not only will the efficiency of the school system be promoted from an educational standpoint, but also an economy to society will be effected. The early discovery of unstable mental qualities in a child combined with proper guidance thereafter will often prevent the development of mental disorders later in life.

INTERNAL MEDICINE

J. H. Cannon, M. D., F. A. C. P., Charleston, S. C.

ATROPHY OF THE LIVER DUE TO CINCHOPHEN PREPARATIONS

M. A. Rabinowitz, M.D., Brooklyn
J. A. M. A. *October* 25, 1930

Cinchophen, chemically 2—phenyl, quinoline —4—Carboxylic acid, was introduced into medicine in 1908; since which time it has been very widely used particularly in Arthritis, and muscle and nerve pains. It is being dispensed over the drug counter in tremendous amounts on the request of laymen as being a "safe analgesic." However, evidence is accumulating to show that at least under certain circumstances or in certain predisposed individuals it is not so safe as was thought but may be extremely dangerous.

The first case to be reported was by Werster-Drought in 1923 due to Atophan; the next by Cabot in 1925 due to Weldona tablets. Since 1926 an increasing number have been reported until Rabinowitz has been able to collect about fifty cases with twenty-five deaths due to Cinchophen or its allies, of which there are a considerable number—a list of which follows:

Phenyl-cinchoinic acid, Atophan, Novatophan, atophanyl, Diiodoatophan, Biloptin, Oxyliodide, Quinophan, Agatan, Neocinchophen, Phenaquam, Leucotrepin, Atophanurotropine, Fantan, Iriphan, Telysin, Weldona, and Farastan are all congeners of Cinchophen. Atoquinal (Atochinal) is a derivative of Cinchophen.

Willcox believes that the toxic action is from the Quinoline Nucleus, consisting of the benzene and pyridine rings, which yield the toxic ring of free benzene and Sollman, that under certain conditions of oxidation the Quinoline Nucleus produces highly toxic nitro compounds.

Evidently certain patients are tremendously intolerant to the drug since three, and four and five tenths gm, respectively have produced symptoms; indeed, one case is reported by Rabinowitz in which a seven and one-half gm. tablet produced nausea and vomiting, stupor, angio-neurotic edema, high fever, and oliguria. On the other hand Hench mentions a case who had taken forty to ninety grains daily for eighteen years with no apparent ill effect. In those who are predisposed nothing used so far has served to protect against the bad effect, such as large amounts of water, large doses of soda Bicarbonate or intermittent rather than continuous use. He thinks that possibly large amounts of Carbohydrates with insulin might be protective.

The drug appears especially dangerous in states of hepatic damage accompanying starvation, malnutrition, cachexia, chronic infection, or tonsillectomy, after fevers, or in conditions favoring decreased glycogen content of the liver cells.

Patients with Gall bladder disease, cirrhosis of the liver, pregnancy, chronic alcholism, chronic nephritis, these with a history of jaundice, and those showing any other evidence of Cinchophen intolerance seem particularly predisposed.

Early signs of toxicity are malaise, anorexia, nausea, vomiting, indigestion, pruritus, urticaria, alubminuria, pains about the liver, subicterus, tender liver, increase of bilirubin content of blood, bile and urobilin in urine, marked derpression of vasomoter system, purpura, scarlatiniform rash or edema with fever.

Treatment: Stop the drug, large amounts of fluid and carbohydrates, if necessary by rectum and by vein, five to ten units of insulin three times daily, and reduction of protein in the diet to minimal amounts.

SOCIETY REPORTS

SPARTANBURG COUNTY MEDICAL SOCIETY. RESOLUTIONS ON DEATH OF DR. WIDEMAN

"Is is with regret that we have to report to this society the death on October 10th of Dr. S. A. Wideman. This writer has known Dr. Wideman from his childhood. His father was Dr. J. W. Wideman—for a generation the leading physician of Due West and its community. His mother was Mrs. Emma Jordan Wideman—an unusually lovely and lovable woman. From such parents could come only a heritage that was goodly. He was a gentleman—honorable—upright and true. He loved laughter—he loved music—he loved his fellow man—he loved his profession. He bore with him a physical infirmity that he knew was ready to cut short his life at any time—yet in the face of it he carried on with a cool calm courage and fortiude that might well serve as an example to all. To his family—his friends and his patients this society extends sympathy and goes on record that his death is a distinct loss. J. J. Lindsay, Chairman, Geo. Thompson, A. R. Fike Spartanburg County Medical Society."

SPARTANBURG COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Spartanburg County Medical Society was held Monday, October 27, 1930 at 8:00 P. M. at the Spartanburg General Hospital. About thirty members were present.

Dr. J. C. Josey read a very interesting paper on "Some Salient Points in the Diagnosis and Treatment of Malaria." This paper was discussed by Dr. Cecil Rigby, Dr. W. W. Boyd, Dr. D. L. Smith, Dr. J. Warren White, Dr. G. E. Thompson and Dr. A. R. Fike. The discussion was closed by Dr. Josey.

Dr. J. H. Sanders of Gaffney, S. C. made a very instructive talk entitled "Comments on Blood Pressure." Dr. W. W. Boyd, Dr. J. J. Lindsay, Dr. Roy P. Finney and Dr. D. L. Smith discussed Dr. Sanders' talk.

All members present agreed that these two papers were among the best that they had heard in some time.

Motions were discussed concerning changing the dues from seven to ten dollars per year and also concerning separation of the office of Secretary and Treasurer and electing a member to each office. These motions are to be voted on at the November meeting.

The President also requested that a committee be appointed to investigate the advisability of inviting members of other societies to join the Spartanburg County Medical Society. There being no further business the meeting adjourned.

C. W. Bailey President.
W. M. Sheridan—Sec.-Treas.

TRI COUNTY MEDICAL SOCIETY MEETS AT ABBEVILLE, S. C.

The Tri-County Medical society of the third district met in Abbeville Thursday October 13, 1930, at noon with an attendance of 35 members. Dr. W. L. Pressley, of Due West, retiring president, presided over the meeting and an address was made by Dr. William Weston, of Columbia, who stressed the iodine properties of the South Carolina vegetables.

Dr. Sam Orr Black, of Spartanburg, spoke of the methods of stamping out goiter and Dr. Thomas H. Pitts, of Columbia, also spoke. Dr. George P. Neel, of Greenwood, entertained the meeting with reminiscences of other days and the changing times, which was enjoyed by all present.

Dr. J. H. Wicker, of Newberry, was elected president; Dr. W. H. Turner, of Greenwood, first vice president; Dr. J. Marion Symmes, of Greenwood second vice president; Dr. H. B. Thomas, of Whitmire, secretary.

This meeting was held at the Eureka hotel where dinner was served. The next meeting will be held the first Thursday in October, 1931, in Newberry.

The counties making up this organization are Newberry, Greenwood, Laurens, McCormick and Abbeville.

FOURTH DISTRICT MEDICAL SOCIETY MEETS AT SPARTANBURG

Dr. W. M. Sheridan, of Spartanburg, was elected president and Dr. G. E. Thompson, of Inman, was elected secretary and treasurer of the Fourth District Medical Association at its annual convention held at Spartanburg, S. C., October 15, 1930.

The election of officers brought to a close what was termed as the most successful district meeting in the history of the association. The session was attended by more than 100 delegates from

Spartanburg, Anderson, Greenville, Cherokee, Oconee, Pickens and Union counties.

The morning session was featured by an address by Dr. L. G. Clayton, of Central, president of the association, who declared that physicians in this district will find their strength in unity and that every doctor should be a member of his county medical society.

Value of Meetings

"You doctors have been heard to complain that you don't get anything out of these meetings," Dr. Clayton said during his address, "but you won't get any more out of them than you put in them whether they be county, district or state meetings."

"I think that it is a duty of every doctor to become, first, a member of his local county medical association. If you are going to be a member of the American Medical Association you must be a member of your state organization and you can't be a member of the state association until you have become a member of your county board."

At the conclusion of the president's address, Dr. H. R. Black, of the Mary Black clinic, paid a glowing tribute to the address by Dr. Clayton and declared that the president had just delivered one of the best and most inspiring talks in the history of the association.

Scientific Papers

The afternoon session was devoted to the hearing of 13 scientific papers presented by various members of the association.

Governor-elect Ibra C. Blackwood was the guest of honor at the luncheon given by the association.

Those who registered were as follows:

L. G. Clayton, Central; E. A. Hines, Seneca; W. Frank Ashmore, Greenville; W. T. Lander, Williamston; W. C. Mayor, Fairplay; A. C. Smith, Glenn Springs; J. L. Bolt, Six Miles; L. Rosa Gantt, Spartanburg; Frank Lander, Williamston, S. T. D. Lancaster, Spartanburg; Lee J. Wall, Easley; L. O. Mauldin, Greenville; T. M. Davis, Greenville; H. D. Wolf, Greenville; D. H. Smith, Pauline; W. S. Judy, Greenville; Russell Wilson, Spartanburg; George G. Thompson, Inman; J. W. Curry, Greenville; Clay Evatt, Greenville; H. T. Hames, Jonesville; R. M. Pollitzer, Greenville.

Kenneth M. Lynch, Charleston; G. T. Tyler, Jr., Greenville; J. T. Murray, Greenville; J. H. Crooks, Greenville; J. H. Sanders, Spartanburg; W. B. Lyles, Spartanburg; O. C. Bennett, Spartanburg; W. W. Boyd, Spartanburg; J. Moss Beeler, Spartanburg; J. D. Guest, Greenville; George R. Wilkinson, Greenville; J.B. Townsend, Anderson; Hugh R. Black, Spartanburg; W.A. Strickland, Westminster; D. L. Smith, Spartanburg; P. Joseph Johnston, Greer; E. A. Hines, Jr., Spartanburg; O. L. F. Jackson, Union; W. T. Brockman, Greer; J. G. Going, Union; Frank Howard Richardson, Black mountain, N. C.; J. T. Ligon, Spartanburg.

E. W. Carpenter, Greenville; T. M. Davis, Greenville; C. P. Corn, Greenville, R. M. Pollitzer, Greenville; William B. McWhorter, Anderson; J. T. Carter, Spartanburg, and several who did not register.

MINUTES OF A SPECIAL MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL TUESDAY EVENING, JULY 1st, 1930, at 8:30 O'CLOCK

The meeting was called to order by the President, Dr. J. Sumter Rhame.

Present: Doctors: Allen; Beach; Bowers; Byrnes; Burn; Cannon; Cathcart; de Saussure; Jackson; W. H. Johnson; Lynch; McCrady; Mitchell; O'Driscoll; F. L. Parker; Pearlstine; Prioleau; Rhame; W. M. Rhett; Richards; Rutledge; W. A. Smith; Waring; Wild; I. R. Wilson; Robert Wilson. (26).

Guests: Dr. and Mrs. Edward Mellenby of Sheffield, England; Dr. Mazyck Ravenel, of the University of Missouri; Dr. William Weston, Chairman of the South Carolina Food Research Commission; Dr. and Mrs. Roe E. Remington; Dr. and Mrs. Levine of the South Carolina Food Research Laboratory; Mrs. Ashley Halsey of the Charleston County Tuberculosis Association; Graduate Nursing Staff of the Roper Hospital and the City Health Department; Dr. Edward Simons of Summerville, S. C.; Interne Staff of the Roper Hospital and Medical Students of the Medical College of the State of South Carolina.

The President stated that the meeting had been called in honor of the visit of Dr. and Mrs. Mellenby of Sheffield, England, and requested Dr. Mazyck Ravenel, a former member of this Society, to introduce the speaker.

Dr. Ravenel stated that Dr. Mellenby was a guest of the American Medical Association at its meeting in Detroit and he came to Charleston on the invitation of Dr. William Weston to visit the Food Research Laboratory here. He stated that Dr. Mellenby was an officer of the Royal Society of England and that he with Mrs. Mellenby had done pioneer work in nutrition. He spoke of the high scientific attainments of both of the distinguished guests and expressed his appreciation of the honor of being called on to introduce them to this Society.

Dr. Mellenby expressed his pleasure in being present and gave an inspiring address to the Society on "Nutrition," emphasizing especially the activity of the various vitamines in the growth and development of animals and of man. He used lantern slides to illustrate his lecture.

Dr. M. W. Beach and Dr. W. H. Johnson discussed the paper, Dr. Mellenby closing.

There being no further business, the meeting adjourned.

W. A. Smith, M.D,. Secretary.

REGULAR MONTHLY MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY HELD IN THE LECTURE HALL, CITY HOSPITAL, MONDAY, SEPTEMBER FIRST, 1930

The meeting was called to order by the President, Dr. Guess at 8:40 P. M. with about thirty-five members and guests present.

Clinical case reports were then called for. Dr. Davis reported a case of bladder stone which he was unable to crush; removal was by operation.

The President then called upon Dr. Roy D. Metz who presented a very masterly paper on the colonic diseases. Dr. Metz first discussed the subject of chronic constipation stating that is apt to result from nervous strain. The colon is frequently the seat of digestive disturbances—the spastic colon is the constipated colon, the aetiology is not clear. Hypertonicity of the colon may result from anything. The spastic colon is usually preceded by chronic constipation.

Under the caption of mucous colitis, Dr. Metz mentioned that there is no definite aetiology, and that it is very difficult to trace a pure neurosis as its cause. A number of theories were then mentioned. Avoidance of certain foods may cause symptomatic relief. Roberts maintains that this is due to psychic influences. The mucus in the stools resembles egg albumin; proctoscopically there is no evidence of pathology.

Ulcerative colitis is thought to be due to a coccus, which is secondary to some focus of infection; avitaminosis is also offered as a possible explanation. The spastic colon predisposes to ulcerative areas, due to the lessened resistance. The X-ray is a very valuable aid to diagnosis.

Dr. W. T. Brockman was then called upon who spoke on the subject of rectal diseases with special reference to treatment. He mentioned that the digestive system should be considered as a whole. We have been slow in linking up the diseases of the terminal bowel with the infections of the upper digestive tract, which can be traced out usually. Some infections travel rapidly down the digestive tract. Inflammatory conditions cause most of the symptoms of this system.

Dr. Brockman then stated that rectal pain is the best tolerated of all pains, and that a diagnosis often depends upon the history of the case gotten over a period of time. A severe infection of the gastro-intestinal tract nearly always leaves a damaged terminal bowel. Bad teeth, tonsils, appendix, etc., are thought to be the aetiology of such infections.

Some rectal disease are not arrested until foci of infection in the mouth are removed. The failure of patients to complain of symptoms of lower bowel trouble does not rule out pathology in this region. Resistance of entry into the rectum of instruments, etc., is indicative of rectal disease. We must not think in terms of classical signs and symptoms, but in terms of the findings made on physical examination. Discussed by Dr. Tyler; closed by Drs. Metz and Brockman.

New members transferring into the County Medical Society were Drs. S. E. Lee and W. S. Judy; their applications were unanimously approved.

Dr. Davis moved that a Committee be appointed to draw up resolutions on the recent death of Dr. Theodore B. Hayne; seconded and carried.

There being no further business, the meeting adjourned.

I. S. Barksdale, M.D.,
Secretary.

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL TUESDAY EVENING, OCTOBER 14th, 1930, AT 8:30 O'CLOCK

The meeting was called to order by the Vice President, Dr. Henry W. de Saussure.

Present: Doctors: A. E. Baker; B. R. Baker; Ball; Banov; Beach; Beckman; Bowers; Buist; Burn; Cain; Cathcart; Chamberlain; de Saussure; Finger; Hay; Hope; Jenkins; F. B. Johnson; Maguire; Martin; Mitchell; Mood; O'Driscoll; Palmer; E. F. Parker; F. L. Parker; F. R. Price; Prioleau; Ravenel; R. B. Rhett; Richards; Rutledge; Sams; Scharlock; J. E. Smith; W. A. Smith; Taft; Whaley; I. R. Wilson; I. R. Wilson, Jr.; R. Wilson.

Guests: Captain J. F. Murphy and Lieutenant Morton of the U. S. Navy Yard; Lieutenants Malcolmson and Beddee of the U. S. Destroyer Fleet; Dr. Hayden of the Board of Health; Dr. Roe E. Remington; Dr. C. B. Woods; Dr. Culbreath; Dr. Peoples; Dr. P. M. Temples; internes and medical students.

The minutes of the regular meeting of June 24th, and of the special meetings of July 1st and July 15th, were read and confirmed.

The Secretary read a letter from Dr. Sylvia Allen requesting transfer to the York County Medical Society. The Vice President directed the Secretary to arrange for the transfer of this membership.

The Secretary read a letter from Dr. Charles W. Kollock, in which he tendered his resignation to the Board of Commissioners of Roper Hospital. It was moved, seconded and carried that Dr. Kollock's resignation be accepted with regret and that the Secretary write to him and express in behalf of the Society the deep appreciation of his many years of faithful service.

Dr. G. McF. Mood, Chairman of the Board of Commissioners, submitted in booklet form the annual report of Roper Hospital for the year 1929, and he directed the attention of the members to

certain important parts of the report, in relation to the amount of work being done, and to the finances, in comparison to previous years.

The Secretary directed the attention of the Society to the fact that the chairs for seating members of the Society occupy too much space and are not numerous enough to seat the membership. It was moved, seconded and carried that the Board of Commissioners be requested to purchase a sufficient number of suitable chairs for the Society Hall.

Dr. R. S. Cathcart, Chairman of the Board of Finance, reported as follows:

October 14, 1930.

The Board of Finance begs to report that the bequest of Fifteen Thousand Dollars ($15,000.00) received from _____ has been invested and the Deed of Trust governing the same has been deposited in the lock box of the Board of Finance in the South Carolina National Bank, 253 King Street.

Under Miscellaneous Business, Dr. F. G. Cain moved that the Society proceed with the election of a member of the Board of Commissioners to fill the vacancy created by the resignation of Dr. Kollock. This was seconded and carried. Dr. Martin nominated Dr. A. J. Buist to fill the unexpired term of Dr. Kollock. This was seconded, and Dr. Buist was unanimously elected.

The Scientific Program was called at 9:00 P. M.

Dr. R. B. Taft exhibited and demonstrated an automatic polarizer which he has invented for use in connection the x-ray machine.

Dr. A. J. Buist reported a case of congenital atresia of the vagina with hemosalpinx on both sides.

Dr. W. A. Smith reported and exhibited a case of complete transposition of the viscera. There was also suffering with broncho-sinusitis.

Dr. E. F. Parker read a very delightful paper entitled "Believe It Or Not."

There being no further business, the meeting adjourned.

W. A. Smith, M.D.,
Secretary.

COLUMBIA MEDICAL SOCIETY

Meeting called to order by the President J. Heyward Gibbes at 8:30 P. M., October 13, 1930. Minutes of last meeting read and approved.

Dr. Julius H. Taylor reported a very interesting caso of osteomyelitis of the metafhysis of the humerous.

The first speaker was Dr. William Weston on the Contribution of the South Carolina Food Research Laboratory to the Science of Nutrition. Some very interesting figures were given showing the higher content of the mineral elements, especially of iodine, copper, manganese and calcium in our foods (milk and vegetables) as compared with those of other states. Discussed by Dr. Pitts, Dr. W. R. Barron, Dr. Fouche, Dr. Setzler and Dr. M. R. Wyman. Closed by Dr. Weston.

Dr. W. R. Barron moved that Dr. Weston be commended and given a vote of thanks for the work he was doing. Motion seconded and passed.

Due to sickness Dr. Sydenstricker was unable to come but sent his paper to the president who by the motion of the society read his paper. His subject Coronary Occlusion was very ably presented and proved of great interest to the society. Discussion was opened by Dr. N. B. Heyward followed by Dr. Madden, Dr. Harmon and Dr. Gibbes closed the paper bringing up a most interesting point in that the collateral circulation for the cororary arteries came from the bronchial arteries.

The subject of the attendance at the Southern Medical Association was brought up—if 20 men from this territory travel by train a special car will be supplied by the Southern Railroad. Committee to try to get this number was appointed by the President, Dr. Weston, Jr., Dr. Dotterer, Dr. Harmon and Dr. W. R. Barron.

Forty-seven members of the society were present.

Society adjourned at 9:55 P. M.

Respectfully submitted,

William Weston, Jr.,
Secretary.

RIDGE MEDICAL SOCIETY MEETING

The Ridge Medical Society met in the Dixie Highway Hotel, Edgefield, S. C., October 20th, 1930, 7:30 P. M. with an unusually large attendance.

Supper was served in a special dining room, where Dr. W. P. Timmerman expressed his pleasure at being in Edgefield and seeing so many present, and especially some of his old friends who were present at a county Society meeting in Edgefield thirty-nine years ago. He commended the Batesburg and Leesville members upon the fact that one hundred percent was in attendance.

Drs. F. Y. Asbill, D. B. Frontis and others spoke very feelingly of the late Drs. J. W. Hill, R. A. Marsh and W. H. Timmerman, also of Dr. J. G. Tompkins of Edgefield, the oldest physician in Edgefield County. Dr. Tompkins was present and made a short talk.

Resolutions of sympathy and best wishes for one of our past presidents, Dr. J. G. Edwards of Edgefield, who is sick, were passed.

Dr. J. W. Thurmond of Augusta made an interesting talk on obstetrics with special reference to the management of the second stage of labor in a normal primipara. He had a manikin and a foetus with which he demonstrated the methods advocated by him.

His address was discussed by Drs. Timmerman, Frontis and others.

Ds. C. M. Burpee of Augusta read an interesting and instructive paper on Infant Feeding.

Many questions were asked by various ones and full explanations to them were given by Dr. Burpee.

Dr. James Byrd of Edgefield joined our Society.

The following committees were appointed by President Asbill.

On Public Policy and Legislation

Dr. D. M. Crosson.
Dr. D. B. Fontis.
Dr. A. R. Nicholson.

On Necrology,

Dr. S. M. Pitts.
Dr. R. H. Timmerman.
Dr. J. N. Crafton.

ON BOARD OF CENSORS

Dr. O. P. Wise.
Dr. W. T. Gibson.
Dr. Jas. Byrd.

It is worthy of note that there are only about half as many doctors in the territory of what was Edgefield County in 1891.

The next meeting of the Society will be in Batesburg.

Accompanied by Dr. Ballinger of Batesburg some weeks ago I visited Dr. J. W. Geiger of Cayce, P.O., R.F.D.

Dr. Geiger is more than ninety-eight years old and lives with one of his daughters. His wife died several years ago.

Dr. Geiger is an interesting conversationalist and though bent with age and a bit deaf delights to greet his friends and tell of interesting events in his earlier days. He had good opportunities to secure a city practice, but preferred to remain in the rural districts, which he served faithfully and well until he became too feeble to properly attend to the sick.

He was quite interested in his profession and when younger frequently attended medical meetings in his section.

I first met him at a meeting of the state medical association in Columbia and after locating in Lexington County it was my pleasure to meet him at our county medical society meetings from time to time.

W. P. Timmerman, M.D.,
Secretary.

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South Carolina Medical Association

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District 8.

THE WOMAN'S AUXILIARY TO THE RIDGE MEDICAL SOCIETY MEETS

In the historic old town of Edgefield, which one might term as a little world of its own, the Woman's Auxiliary to the Ridge Medical Society held its regular meeting October 20th, 1930, 7:30 P. M. in the home of Mrs. A. R. Nicholson.

Assisting Mrs. Nicholson as hostess was Mrs. Courtland Beeler.

Since the meeting prior to this time, when an invitation was extended to meet in Edgefield, the Auxiliary had been looking forward to the well-known hospitality which is characteristic of these good people.

A lovely Indian Summer evening, congenial company, good roads, all in all, contributed to the most enjoyable ride and ere we realized, we were there—

After greetings, an half hour or so of social contact, our charming hostesses served an elegant supper, after which the president, Mrs. W. P. Timmerman, called for order and the regular business session was held. Following, interesting papers were read on Harvey and Jenner and their contributions to medical profession. Music also played its part on the program.

Members from Wagener, Saluda, Batesburg and Ridge Spring were present and this was unanimously declared a most enjoyable meeting and one which will prove beneficial.

To the Sims Memorial Donors:

At a joint meeting of the Woman's Auxiliary to the Medical Association and the Sims Memorial Committee, November 5, at the Jefferson Hotel, Columbia, S. C., it was unanimously voted to turn over to the Treasurer of the Woman's Auxiliary the sum of $91.75 the balance left from the Sims Memorial fund, after all bills were paid.

This sum of money is to be kept in a separate fund and to be known as the Sim's Memorial Fund, in the saving's department (of some bank the treasurer selects) and the interest used for the upkeep of the Memorial. In accepting the Memorial the State provided no funds for repairs or cleaning, and there might, from time to time, arise the need of restoring the granite to its original color, instead of allowing layer after layer of the accumulation of years of dust and dirt to mar its dazzling beauty. The pebble foundation may also need repairs, as it is not as enduring as concrete or stone, the vastly more artistic. Therefore the Committee voted, that for the present, the fund was not to be used and the interest used only for the purpose designated.

The State Medical Association in annual session at Charleston, S. C. 1929, after hearing the final report of the Sims Memorial Committee, in appreciation of their services refused to discharge them at the request of their Chairman, but voted to retain them for life to care for the Memorial. We accepted the honor as a sacred trust, and will administer the interest of this fund to the best of our ability.

Sincerely yours,

(Mrs. H.M.) Daisy Lee Stuckey.

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ROENTGENOLOGY
T. A. Pitts, M.D., Columbia, S. C.

PATHOLOGY & BACTERIOLOGY
H. H. Plowden, M.D., Columbia, S. C.

SURGERY
Wm. H. Prioleau, M.D., Charleston, S. C.

EYE, EAR, NOSE & THROAT
J. F. Townsend, M.D., F.A.C.S., Charleston, S. C.

DERMATOLOGY
J. Richard Allison, M.D., Columbia, S. C.

GASTRO-ENTEROLOGY AND PROCTOLOGY
W. T. Brockman, M.D., Greer, S. C.

NERVOUS & MENTAL DISEASES
E. L. Horger, M.D., State Hospital, Columbia, S. C.

MEDICAL RESERVE CORPS
Col. J. E. Daniel, Med. Res. Greenville, S. C.

PUBLIC HEALTH
B. F. Wyman, M.D., Columbia, S. C.

EDITORIAL

GREETINGS OF THE SEASON AND COMMENTS ON THE YEAR'S WORK

At this time every year we take a look backward and a look forward and endeavor to point out some of the things of most importance.

In general scientific medicine in South Carolina has made splendid progress. The constituent county and district societies, for the most part, have kept up their programs in an interesting way. From an organization standpoint the State Association has continued to move forward. The membership remains about normal and the Journal has done well in both the advertising department and the publication of scientific articles.

President Lynch started out with the intention of stressing a higher type of medical education and therefore a higher type of medical practitioner. He has visited many sections of the state and delivered notable addresses along this line. Few men in the United States have the clear cut vision, coupled with the wide experience in teaching, as has our President. It is highly fitting that such a campaign be undertaken now and then, especially, at a time when organization problems per se do not demand all of the time of the President.

As we see it much of the credit for the satisfactory status of the Association is due to the splendid leadership of the officers of many of our county and district societies this year. It has long been customary to assume that the secretaries of these organizations are the key men and upon them rests the responsibility, to a large extent, for the success of the meetings. While there is a good deal of truth in this assertion from rather an extended observation we wish to include the names of many of the presidents this particular year. We have had the opportunity of observing many of the societies functioning and have been deeply impressed with the splendid way in which the presidents of some of these societies have borne their share of the burden.

It is now the season for a change of officers in many societies although for the most part the secretaries serve a number of years. We wish

to call attention to the splendid work of the Charleston Society under the guidance of President Rhame and Secretary W. Atmar Smith. The reports they have sent to the Journal never fail to be of keen interest to the profession of the State.

The Greenville County Society, under the inspiring guidance of Dr. Guess as President and Dr. Irving S. Barksdale as Secretary, closes a very successful year. Dr. Barksdale has made an unusually able Secretary and has filled the office for five years and now he is honored, as he deserves to be, with the Presidency. Still greater things will come from the Greenville County unit the coming year and the entire State is interested for the reason that the State Association meets there in 1931.

The Spartanburg Society has put over an ambitious program with Dr. Williams Bailey in the Chair and Dr. Wm. M. Sheridan attending to the duties of the Secretaryship in a highly creditable way. The wide expansion of hospital facilities and public health clinics in Spartanburg County has attracted the attention of the whole country during the past year and organized medicine there deserves much of the credit.

Attention was called in the Journal, at the time, that Dr. J. Heyward Gibbes of Columbia stepped into the office of President, that there would be forth coming developments worthy of careful watching by other societies in the State. This has proved to be the case. The programs there have been enriched all along by visitors of national and international fame. The local men have vied with each other in giving of their best at each meeting. The doings of the Society have been reported with consistent regularity by the efficient Secretary, Dr. William Weston, Jr.

Another Society is that of the electric city of Anderson whose achievements have kept pace with modern progress under the direction of Dr. T. G. Gaines, President, and Dr. D. J. Barton, Secretary. They have a splendid profession in Anderson and they are noted for their good fellowship as well as their scientific attainments. It is like visiting in a "big family" when one attends their meetings.

Down in Marlboro they do things in a big way when they undertake their meetings. All the surrounding states look forward to something well above the average when Secretary D. D. Strauss and his co-workers send out their programs.

Over in another direction well across the State, Ex-President of the State Association, Price Timmerman, who is also Secretary of the Ridge Medical Society which consists of Lexington, Edgefield and Saluda is frequently reporting unusually attractive meetings.

In the Abbeville section, President W. L. Pressly of Due West, has put on good programs.

Chester, York, Sumter, Oconee, Pickens and several other of the smaller societies have continued to function with creditable records.

We would not forget the Florence County Medical Society under the inspiring leadership of President Mobley. The whole State Association had ample opportunity to enjoy the remarkable hospitality of that Society at the meeting there in May.

We wish to especially commend the officers of the various district societies as they have met in different parts of the State during the year. Without exception they have been admirably conducted and every one of them had good programs.

The very small medical society still has handicaps in keeping up enthusiasm and in meeting regularly. The greatest trouble, perhaps, is the seeming difficulty of holding regular meetings and frequent meetings in such societies. Formerly this feature could not be overcome, owing to the lack of good roads. This is no longer the case however and it appears that the officers of such societies should make every effort to call the meetings on time and at frequent intervals. If so, it is almost certain that the effort will be rewarded by an increasing interest on the part of the membership.

As to the future, we have every prospect for a continuation in 1931 of the good work that has been done throughout the State during 1930. We are far advanced with the plans for the Greenville meeting. The prospects are bright, indeed, for a wonderful convention. We are unable to think of any obstacle in the way. The city is easily accessible, the hotel accommodations leave nothing to be desired, the

place for holding the meeting and scientific and commercial exhibits will be ample. Then too, Greenville is a medical center of outstanding accomplishments on the part of the profession and the hospitals. Climatic conditions are usually almost perfect at the time of the year our Association meets. The Piedmont in the late spring is a fascinating section of the country to visit.

As the old year goes out and the new year comes in we felicitate the profession of South Carolina on their past and on their future.

TRI STATE MEETS AT RICHMOND, FEBRUARY 16-17

Advance information from President W. B. Lyles of Spartanburg and Secretary J. M. Northington of Charlotte indicates an unusually attractive program for the thirty-third annual meeting of the Tri-State Medical Association of the Carolinas and Virginia. Among the special features will be a clinic to be held by Dr. John R. Caulk, Clinical Professor of Genito-Urinary Surgery in Washington Uni., St. Louis. Dr. Caulk will also deliver an address. Another special feature will be a clinic and address by Dr. Louis Hamman, Professor of Clinical Medicine, Johns Hopkins Medical School, Baltimore. Richmond is a fascinating medical center in which to hold the meeting. In addition to its fame as an educational city the historical associations should appeal to the profession of the South especially. There should be a great meeting at Richmond.

DATE OF GREENVILLE MEETING MAY 5, 6, 7, 1931

Owing to many conflicting interests and the desire of the various committees to provide a program that will insure the largest attendance in the history of the Association the fixing of the time of the next annual meeting has been slightly delayed. We are glad to announce now that every seeming obstacle in the way of conflicts, either for our guests or for the essayists, have been overcome. Some additional features have been added by the program committee worthy of comment here. Attention has already been called to the symposium on some phase of Psychiatry which will be held on the first day of the scientific meeting, that is, May 6. The South Carolina Urological Society will put on a symposium on May 7. Another effort will be made to make the second day as interesting as the first day and therefore providing a sufficient urge for the members to remain over until the end. On the afternoon of the second day an extensive series of clinics will be provided for. There has been such remarkable development in hospitals in and around Greenville that there will be ample clinical material. The House of Delegates will meet on Tuesday night, May 5.

S. C. ASSOCIATION, EYE, EAR, NOSE AND THROAT SOCIETY MEETS AT COLUMBIA, JANUARY 12

Elsewhere in this issue is the provisional program of one of our vigorous scientific societies noted for its increasing progress and for the high type of program usually presented to the profession.

The principal address will be by Dr. Gabriel Tucker, University of Pennsylvania. This will be discussed by Dr. Percy Hay of Florence, who is probably the first in this country to publish an X-ray study of the soft tissues of the neck, the work being done at the University of Pennsylvania. The meeting will begin at 1 o'clock adjourning in time for dinner at the end of the program. Dr. Tucker's address will come at 7:30 P. M. It is expected that a large number of visitors will be present to participate in the meeting.

S. C. PEDIATRIC SOCIETY MEETS AT COLUMBIA, JANUARY 14

The annual meeting of the pediatricians at the State Capital always attracts a good attendance, not only of specialists but of general practitioners interested in children. Good clinics are usually held and important papers read. This year Professor Casparis of Vanderbilt University will be the invited guest.

THE USUAL BIG ANNUAL MEET MARLBORO SOCIETY, JANUARY 7

Secretary D. D. Strauss of Bennettsville is working hard on their annual program which is always an important event in the medical annals of the South Atlantic States. The splendid scientific program, big banquet and good fellowship is looked forward to each year by numerous friends of the Marlboro profession. The coming meeting will be no exception but will be larger and better than ever before.

PRESIDENT'S PAGE

By Kenneth R. Lynch

THE AIMS AND OBLIGATIONS OF ORGANIZED MEDICINE. III.

Education in Medicine.

One of the direct aims and fundamental obligations of organized medicine is the promotion of continued progress in the foundation of medicine, medical education. One of the most active interests of a State medical association should be a virile participation in the support of the institution for medical education in that State. In fact it would seem that the ideal relation between the State medical association and the State medical school might be constituted of some measure of reciprocal responsibility.

Medical education in this country has been raised within the generation from a state of virtually no education at all but a sort of apprenticeship training to one in which at least some of the fundamental principles of education are practiced, entirely through the medium of assumed control by the National medical association.

A State's system of higher education, constituted of various units, schools and colleges, composes the State's university system, and the methods of administering the system are various. The development of methods and ideals of higher education, including undergraduate and postgraduate curricula, the promotion of research and of the spirit of service to humanity, constitute the field of university activity. Of such a system the medical school is in the position of a postgraduate college with particular opportunity in utilitarian service. A proper conception of the place and function of the State medical school is of this order.

A medical school which is not able—by virtue of material handicaps—to serve the Profession and its people beyond the education of students in the fundamentals of medicine and in providing the State with an annual quota of recruits to the Profession loses a large part of its potential usefulness, of its potentiality for service to the general population.

It is not good for a medical school to be held to the position of a follower, it should have its own qualities of individuality and of policy, it should be able to take its place in leadership in some form at some time. Qualities of leadership may sometimes be present and be starved by lack of support—usually more in the matter of an inadequate staff—for its development.

The medical school of a State should properly be the center of radiation of medical progress in that commonwealth—the clearing house of advance in medical knowledge. It should be a place from which would emanate betterments in medicine for the good of the people and from which its supporting Profession would benefit and of which it might boast.

There is a wide difference in any endeavor between the results produced out of the bare necessities for existence and that extra bit which is necessary for progressive forward movements.

Not long ago a survey was made of the character of practise and the interests of the medical profession of a certain region in this Country. In that region, where thero was no medical school, the Profession expressed little interest in medical education—and the character of practise was correspondingly low.

The Medical Profession of South Carolina has demonstrated many times its appreciation of the full value of progressive medical education. The general population are wholly ignorant of the needs of a medical school. Legislators are more or less in the dark in such matters. The wonder is that any support at all is obtained—not that it is not adequate. There are comparatively few people who even know that a State medical school exists among us. There are leaders in industry in the State who do not know it. There have been recently, if there are not now, members of the Legislature who do not know it. Far too many people, far too many physicians, consciously or subconsciously think and even speak of the "Charleston Medical College." Consequently the position of the School before the people and even before the Profession is inadequate for the well being of the institution: it stands at times in a definitely false position.

(Continued on Page 318)

ORIGINAL ARTICLES

*HOW AN EYE WAS SAVED BY PLASTIC SURGERY

By L. O. Mauldin, M. D., Greenville, S. C.

This patient, V. G., was in the Shrine Hospital at Greenville, S. C., for the correction of a slight orthopedic trouble when I was asked to see him about his eyes.

At the age of six months he fell into an open fire and was severely burned in the face, especially on the entire left side. It seems that the burned area cured up in due course of time, but at the age of thirteen years when I first saw him, the entire left side of his face was covered with scar tissue and presented the contractions and distorted features that would naturally be expected to attend a severe burn of this character in the face.

In addition to the scar tissue covering the left side of the face, he had no eye brow on this side and the upper eye lid was turned out and up; the eye lashes of this lid were plastered in the scar tissue where the eye brow should naturally be. The lower lid was turned out and down and the margin of this lid without eye lashes could be recognized massed in scar tissue of the cheek about an inch below its natural place thus giving an ectropion of both lids with inability to close the eye, though the patient seemed to be making a continuous effort to do this. The cornea thus unprotected showed an ulcer in the form of a horizontal streak in its lower quadrant. The eye had a profuse lachrymation with frequent trickle of tears down over his scar covered cheek. The patient though otherwise healthy and though uncomplaining suffered a constant dull pain in the region of the left orbit. To his other deformities was the added feature distortion of having the left angle of his mouth caught up in scar tissue and pulled toward the center of his cheek and about on a line with the level of the lower part of the nose. With the foregoing description I believe you can picture in your mind the scar tissue covering the entire left side of the face, the ectropion of both the upper and lower lids with bound down condition of these lids in the tissue of the face, the unprotected eye ball, the corneal ulceration, the lachrymation, the ever constant desire of the patient to close his eye lids, and the orbital pain. The facts vividly pictured to me the oncoming evidences of a perhaps slow, but certain destruction of an eye which showed almost a normal vision with a tendency to diminished acuity.

Having pictured the condition in my mind I knew that here was a problem of saving an eye and that problem could be solved by the application of plastic surgery; so with the cooperation of Dr. Warren White, Chief Surgeon at the Shrine Hospital, and others connected with that institution as assistants, I shall use the medical "We" and say that we on account of having to deal with moveable tissue such as eye lid elected the method of whole skin grafting because by means of stitches we could better anchor the whole skin to the area to be grafted on and a prepared place on the abdomen was selected from which to take the whole skin to be grafted.

On February 7th, 1930, the patient was given a general (Ether) anesthetic, an incision was made above the orbit so as to release the margin of the upper lid which with its eye lashes were plastered there in scar tissue where the eye brow should have been; this margin was dissected up and by a sliding process it was passed down thus inverting the lid, placing its margin in a natural position and relieving the ectropion. By a similar incision below the margin of the lower lid which was plastered down in the tissue of the face and by a similar method of upward sliding the margin of the lower lid was placed in its natural position and ectropion was relieved. We then stitched the margins of the upper and lower lids thereby closing the eye and immobilizing these lids. By this procedure

*Read before the fourth South Carolina District Medical Society at its regular meeting on October 15, 1930, Spartanburg, S. C.

at this time in the operation we had a considerable raw area exposed above the sutured upper margin and likewise below. These areas were about the size of the respective eye lids of a normal individual, and whole skin was dissected from the prepared place on the abdominal wall and cut to pattern to fit the exposed raw areas and sewed in position with fine dermal suture, tight bandage with even pressure was applied and all surgical precautions as to asepsis were carried out. This bandage was kept on a week and when removed, the grafts looked healthy and seemed to be taking, so the stitches were removed and dry bandage applied at night, but during the day the grafts were exposed to the air, but no moisture was applied to this side of the face for two weeks after the operation. The grafts took well, the lids fitted well over the eye ball, the patient gradually acquired lid motion and after three months the implanted abdominal skin was beginning to assume the appearance of face skin. The corneal ulcer has cleared up without a scar and the lad has a good, useful eye.

On May 2nd, nearly three months after the eye operation a similar grafting operation was done to relieve the deformity at the left angle of the mouth. An incision was made around the left angle of the mouth and the orbicularis oris muscle was slid down in natural position, and a large area of scar tissue was dissected from the cheek, extending from this incision, the left angle of the mouth was sewed up to render the area immobile and whole skin taken from the abdominal wall was stitched on the exposed area. This was kept bandaged nine days and the patient was given an abundance of liquids through a quill through the right side of the mouth. All stitches were removed in nine days and the graft took well. The deformity was much relieved.

The motion pictures representing the case before and after the operation, but not the operation, will now be shown.

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*INFANT FEEDING

By C. M. Burpee, M. D., Medical Department, University of Georgia, Augusta, Georgia.

Infant feeding is one of the most important subjects in the field of medicine today. Not only does it constitute one-half of Pediatrics, but it makes up a good part of the work of the general practitioner. The greatest part of infant mortality is due directly or indirectly to improper feeding.

The metabolic processes of an infant are practically the same as those of an adult, but very much more active. Therefore a larger intake of food is necessary to meet the requirements of the body for growth and energy exchange. An infant requires approximately three times as much food per unit of body weight per day as does an adult during a moderate amount of work. As the metabolic processes of an infant are relatively about three times those of an adult this requires more work from all of the organs concerned with digestion and utilization of food, and to meet this demand the organs have to work constantly much nearer their limit of capacity than those of an adult. This explains the frequency of gastro-intestinal disturbances in infancy and also their seriousness.

When the supply of food is diminished or cut off by digestive disturbances the reserve food deposits are first used up, and then the body tissues are called upon to supply the necessary food, and since the metabolic processes are so much greater than in the adult the destruction of body tissues lead rapidly to serious consequences, which unless intelligently treated end fatally.

In order to feed infants intelligently a knowledge of the physiology of digestion is essential.

The salivary glands of an infant are active but saliva has no effect on the constituents of milk. In the latter part of infancy when starches are added to the diet there may be slight salivary digestion, but it is unimportant until the child can chew its food.

Gastric digestion in infancy is practically limited to the action of hydrochloric acid and pepsin-rennin ferment. The hydrochloric acid action seems to be the most important,

*Read before the Ridge Medical Society, Edgefield, S. C., October 20, 1930.

It inhibits bacterial growth; activates the pepsin-rennin ferment and regulates the pyloric reflex to a certain extent, and also stimulates the production of secretin when it enters the duodenum. The amount of hydrochloric acid secreted at birth is small but increases with the age of the infant. Premature and malnourished infants and those suffering from infections secrete less hydrochloric acid than a normal infant.

In the case of breast milk the hydrochloric acid content is usually sufficient, but in the case of cow's milk it is frequently insufficient, because of the higher buffer value of cow's milk.

The coagulation of casein in the stomach by rennin is practically complete. The curd of breast milk being fine, while raw or pasteurized cow's milk is large and tough. The fats are not digested n the stomach and outside of conversion of small amounts of disaccharides to monosaccharides there is no digestion of carbohydrates. Small amounts of dextrose, animo acids and salts may be absorbed from the pyloric end of the stomach, but it is almost negligible. The stomach is usually empty after two hours in case of breast milk, but only after a longer period of time in the case of cow's milk. After the contents of the stomach pass into the intestines they come in contact with the bile, pancreatic and intestinal juices.

The protein digestion is continued in the small intestine until the proteins are in the form of amino acids and then absorbed as such. Protein digestion and absorption is remarkably complete in infancy even in cases of malnutrition and diarrhœa. The carbohydrates are converted into the mono-sac charids and absorbed as such. The fats are first emulsified, and then saponified, and later converted into fatty acids and glycerin and absorbed.

The large intestine secretes no enzymes and very little food is absorbed from it under normal conditions, though more water is absorbed from it than from the small intestine.

Having rapidly reviewed the physiology of digestion we are now ready to discuss infant feeding.

There is no one way to feed infants. Any method is suitable provided it meets all the requirements of the infant, and any method which fails to meet these requirements is unsatisfactory.

What are the requirements for correct infant feeding? They are only four in number.

FIRST: the infant must receive sufficient food. Using technical words, it must receive sufficient calories.

SECOND: it must receive sufficient protein, carbohydrates, mineral salts, water and vitamines A, B, C, and D. And a certain amount of fats and pigments are desirable.

THIRD: there must be no harmful bacteria present in the food.

FOURTH: the food must be digestible.

We will now discuss each of these requirements separately.

First Feeding Requirement

How are we to know whether the infant is getting enough food? We have to have some means of measuring the amount of food an infant receives, and for this purpose calories are used.

Calories are heat units and are used to measure the amount of heat liberated when food is burned either inside or outside of the body.

Food when taken into the body serves two main purposes; the building of new body tissue and furnishing the necessary source of energy.

Experimentation has shown that during the first year an infant needs fifty calories per pound of body weight per day, provided it is normal in all respects; if it is under weight it will need more, and if over weight less.

Since breast milk contains eighteen to twenty calories per ounce, the total food requirements of an infant will be met when it receives two and a half to three ounces of it per pound of body weight per day. In the case of artificial feeding one third of the calories should be furnished by additional carbohydrates and the other two thirds from cows milk. The food requirements change during the first year, being greatest during the first months and less during the latter months. In case of under nourished infants they require just as much food as an infant of normal weight, and this is considerably more than fifty calories per pound of body

weight per day. Fat infants require less food because the layer of fatty tissue is inert so far as food requirements are concerned.

Unless the infant receives the necessary amount of food it won't gain in weight. However, after all the best way to determine whether it is receiving sufficient food is to find out whether it is gaining or not; if it is gaining it is receiving enough, if it is not and is normal in all other respects it is not getting enough food.

Second Feeding Requirement

The second requirement is that the infant receive sufficient protein, carbohydrates, mineral salts, fats, pigments, water, and vitamines A, C, and D.

To meet the protein requirements for growth an infant should receive at least 2.5 ounces of breast milk or 1.5 ounces of cows milk per pound of body weight per day. This corresponds to about one gram of protein per pound of body weight per day in case of breast milk and one and three fourth grams of protein per pound of body weight per day in case of cows milk. An infant can get along on some less and an excess is not harmful. Under nourished infants require more protein than normal ones.

The carbohydrates requirements are met when an infant receives about one hundredth of its body weight in carbohydrates per day. It receives this amount if its food consists of breast milk in sufficient quantities. In the case of cows milk more sugar has to be added, and it should be added in the proportion of about one part of sugar to ten parts of milk. The best form of carbohydrates to add to the milk is a mixture of sugars of the dextrine and maltose type, such as Karo syrup or Mead's Dextrimaltose. The carbohydrates are necessary to furnish energy as well as to spare the proteins and aid in the metabolism of the fats.

Fats are desirable because they carry certain of the vitamines and by their high caloric value they add to the palatability of the diet. Excessive amounts of fats especially in artificially fed infants is to be avoided because of the irritation produced in the intestine by he lower fatty acids of cows milk. An infant taking enough breast milk or whole cows milk to meet its protein requirements receives all of the fat necessary.

Mineral Salts in the diet are essential if life and growth are to be maintained. They are present in all the cells and fluids of the body as necessary constituents. They are not only necessary for digestion of food, but also for the maintenance of all the vital functions of the body. The bony frame work contains large quantities of calcium, magnesium and phosphorous; the cells potassium and the fluids sodium. During the normal course of metabolism large quantities of these salts are excreted and have to be replaced by the food. Milk, the chief food of an infant, contains all of the necessary salts in sufficient amounts with the exception of iron, and it usually contains enough of this for the first six months of life. After this time it has to be supplied by vegetables, eggs, cereals and meats.

Pigment is also necessary for life. Hemoglobin the pigment of blood contains pyrrole radicles, and since the body is unable to synthesize these radicles they have to be supplied by food. Chlorophyl of the vegetable kingdom is rich in these radicles. Egg yolk, liver and red meats are also rich in them. Milk contains very small amoun's of these radicles so it is advisable to add them to the diet after the sixth month of life.

Water. An infant's body consists of about seventy per cent water, while an adult's body consists of only about fifty eight per cent water. The metabolic rate of an infant is also about three times that of an adult so the water requirements of an infant are correspondingly higher. In fact it needs about three times as much as an adult in proportion to its body weight. It needs this to care for the greater heat output and elimination of waste products of metabolism.

An infant on a milk diet usually receives about two to two and a half ounces of water per pound of body weight. This is sufficient except in hot weather, and then it should have more. Infants cry oftener from thirst than from hunger.

In cases of disturbed metabolism with rapid loss of water larger quantities are required. Only about one to two per cent of the water taken in with the food is retained. The greater part being eliminated through the

kidneys and skin, and a small part through the intestinal tract.

Vitamines: In addition to protein, fat, carbohydrates, mineral salts, pigment, and water, certain other substances have to be present in the diet if the infant is to grow and remain normal in all respects. These are known as accessory food substances or vitamines. At least four of these are essential, vitamines A, B, C, and D.

Vitamine A is spoken of as fat soluble because it is found associated with the fat of milk, egg yolk and glandular organs. It is also present in leafy vegetables and cereals, but only in small amounts. It is abundant in cod liver oil. Deficiency in vitamine A produces Xerophthalmia and Keratomalacia with loss of vision; also increased susceptibility to infection, especially of the sinuses and rhino pharynx.

Vitamine B consists of two factors. One that prevents pellagra and aids growth, and the other that prevents polyneuritis. It is present in vegetables, fruits, milk, yeast and many other articles of diet. It is water soluble. Deficiency of this vitamine not only causes pellagra and polyneuritis but also loss of appetite and failure to grow.

Vitamine C or the antiscorbutic vitamine is present in large amounts in citrus fruits and tomatoes, and in smaller amounts in human and cows milk and vegetables and fruits other than the citrus variety. Deficiency in this vitamine also retards growth and makes the child irritable as well as causing scurvy.

Vitamine D or the antirachitic vitamine is present in large amounts in cod liver oil and ergosterol. It is also present in egg yolk, butter fat, and vegetables. Deficiency in vitamine D causes rickets and defective teeth. Vitamine D is the only vitamine that can be synthesized in the body by ultra violet rays.

Vitamine C is the only vitamine that is readily destroyed by boiling. Boiling milk destroys vitamine C, but as milk contains only small amounts of the vitamines it should not be depended upon to supply them.

The exact amount of the different vitamines required by the infant is not known, but any infant receiving one ounce of orange juice or tomato juice and two tea spoonfuls of cod liver oil daily will receive all of the vitamines he needs. In the summer time sun baths may replace the cod liver oil.

Third Feeding Requirement

The third requisite is that the food contain no harmful bacteria.

All raw milk contains bacteria. Most of these germs are harmless, and the milk when first collected contains only a few bacteria depending upon the conditions under which it is obtained. Milk is readily contaminated by exposure to air, dust, and dirty hands and utensils. Milk produced under clean conditions and kept cold until delivered, if there is no delay, contains ten thousand to fifty thousand germs per cubic centimeter and is considered good milk.

Certified milk contains less than ten thousand germs per cubic centimeter and is usually free of pathogenic bacteria. It is the purest form of raw milk there is. Evaporated milk is sterile and dried milk is usually, tho' not always sterile.

The number of bacteria present in milk serves as an indication of the care taken in obtaining and handling it. All raw milk used in infant feeding should be boiled before it is given to an infant regardless of the number of bacteria it contains.

Fourth Feeding Requirement

The food must be digestible. Most infants are unable to digest fresh cows milk in the same quantities that they can breast milk and for this reason less cows milk can be used. At birth most infants can take about half as much fresh cows milk as breast milk so the milk is diluted half and half. Their ability to digest cows milk increases after a while when they are fed on it so that at four months they can usually digest two thirds as much cows milk as breast milk, and at eight months if accustomed to cows milk they can usually digest it undiluted.

Sometimes the capacity of an infant's stomach is such that it cannot take enough diluted milk to meet its food requirements, and other methods of increasing the digestibility of cows milk have to be employed. There are various ways of doing this. Cows milk has about three times the buffer value of breast milk, and if this is neutralized with

cid the cows milk will be just about as digestible as breast milk. The acid also precipitates the curds in finer particles so that they can be more readily acted upon by the digestive juices.

Milk that has been sterilized and evaporated down to one half its volume when diluted with an equal amount of sterile water is just about as digestible as breast milk and need not be further diluted. Milk that has been dried when diluted to its original volume is likewise about as digestible as breast milk.

These are the methods most frequently used to increase the digestibility of cows milk so that the infant can take enough to meet his food requirements.

Having met all the food requirements the next thing is to know how often to feed the infant. During the early months of life every four hours is often enough, and never oftener than every three hours. After the first month or two five feedings are sufficient and during the latter months of the first year four feedings are enough. After one year three feedings a day are sufficient, and never more than four.

During the first six months of life an infant usually receives all of the food requirements from milk, cod liver oil and orange juice. The cod liver oil and orange juice having been started after the first month of life. After six months it is impossible to meet all of its food requirements with this diet so we start adding solid food in the form of cereals and vegetables.

If the infant is breast fed the first bottle of cows milk is given at six months of life, consisting of six ounces of whole milk with two ounces of sterile water. At seven months he is allowed to have meat juices and meat broths. At eight months the second bottle is added consisting of whole milk seven ounces and sterile water one ounce; egg yolk (hard boiled), simple custards and stewed fruits are also added. At nine months breakfast bacon, and at ten months the third bottle is substituted consisting of whole milk. Scraped meats may also be added with advantage. At eleven months the last breast feeding is discontinued. At one year of age the infant should be getting three or four feedings daily.

Its diet should consist of milk, one quart daily, cereals and toast, two to three ounces, twice daily, vegetables once daily, scraped meats two or three times weekly, eggs two to three times weekly, fruits and fruit juices daily. Simple desserts may be given several times a week.

All food should be warm when given to an infant.

To Summarize Infant Feeding

Since the metabolic rate of an infant is three times that of an adult it needs proportionately three times as much food.

Digestion is started in the stomach but practically all of it takes place in the small intestine.

There are many methods of feeding infants, and all are satisfactory if they meet the infant's needs. An infant needs fifty calories per pound of body weight per day, and this food must be digestible, free from harmful bacteria and contain the necessary amounts of protein, carbohydrates, fats, mineral salts, vitamines, pigments and water.

These requirements are met when an infant is getting two and one half to three ounces of good breast milk per pound of body weight per day or in case of artificial feeding when it receives two ounces of good cows milk boiled five minutes fortified with an additional ten per cent of carbohydrates, per pound of body weight, plus one ounce of orange juice or tomato juice and two teaspoonfuls of cod liver oil or sufficient sunshine.

Underweight infants need more than this and overweight less, and after six months of life additions have to be made to the diet in the form of cereals, vegetables, eggs, meats, fruits, etc.

A four hour interval feeding is the best in the majority of cases.

*A NEW PHYSICAL SIGN IN PULMONARY EMBOLISM OCCURRING DURING LABOR

By J. R. Young, M. D., Anderson, S. C.

The following case is reported for two reasons: (1) *A new physical sign* which may be present *in pulmonary embolism* was discovered. This sign was, at least, elicited and in so far as we can learn it has not hitherto been described. (2) The case illustrates very happily the fact that a patient who appears hopelessly ill may respond to treatment.

REPORT OF CASE

Mrs. S., white, age 25, was admitted to the Anderson County Hospital on June 7, 1929, suffering acutely with pulmonary edema. From her family we learned that the patient had enjoyed good health until onset present illness. During childhood, she had measles, mumps and whooping cough. She had never had scarlet fever, diphtheria, rheumatic fever, typhoid, influenza, pyorrhea, or recurring attacks tonsillitis. Menses began at 13 and were regular and normal. She married at 16 and one year later, after normal pregnancy, her first child was born. This child is living and well and appears normal. During the next five years she had four miscarriages at periods of gestation varying from two to five months. Five days before admission to hospital, patient was delivered normally of a full-term infant who is living and appears normal. During none of these pregnancies had she more than mild symptoms of toxemia except in the last weeks of her recent pregnancy. About five weeks ago she developed headache, insomnia, edema, nonproductive cough, and shortness of breath. Her physician, Dr. H. B. Williams, of Honea Path, S. C., found that she had considerable hypertension and marked albuminuria and he was able to give her some relief. However, her cough and shortness of breath were persistent. She went into labor five days ago, and one hour after labor she experienced a sudden severe pain in the chest followed by symptoms of collapse—ashen color, cold and clammy skin, very rapid pulse, rapid and labored respiration and well-nigh incessant cough. She was given a half grain of morphine with only slight relief. While still in a state of collapse she was delivered of a full-term living infant. Since delivery all of these symptoms have persisted and the patient has been able to rest only for short intervals when narcotized. After being in this precarious condition for five days she was brought to the hospital.

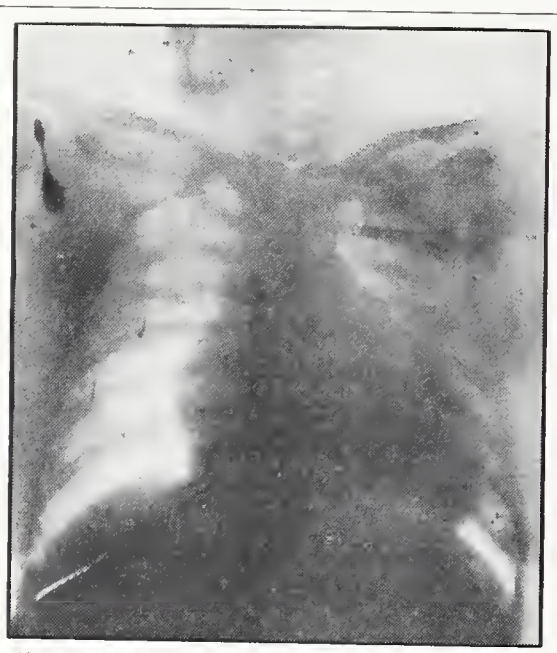
Inspection revealed an ashen-colored young woman suffering severely. She was exhausted and afraid. She was sweating profusely. Her labored breathing was punctuated incessantly by cough which raised a pink frothy sputum. So great was her respiratory urge that she seemed scarcely able to spare the time and effort to expectorate this pink froth which was threatening to drown her. Respiration could not be counted accurately but was 50 to 60 per minute and was accompanied constantly by the moist rattle of pulmonary edema. The only other significant data from inspection were a greatly enlarged and torturous left internal saphenous vein and a copper-like pigmentation of over-lying skin and a moderate degree of edema over the entire body.

By palpation the pulse was 140 to 150 per minute. It was weak. Cardiac impulse could not be felt. The skin and under-lying tissues along left internal saphenous vein were indurated and tender indicating a phlebitis and thrombosis. The uterus was in a stage of subinvolution and there was some tenderness in left lower quadrant.

On account of the labored breathing of pulmonary edema, little information was secured from auscultation of the chest. Heart sounds were scarcely audible. Blood pressure in right arm was 160 systolic and 120 diastolic. About eight hours later, when the patient was slightly more comfortable her blood pressure was taken with the cuff of sphygmomanometer on left arm (reading was same as in right arm) and it was discovered that over the brachial artery, and to some extent, over the entire left arm respiratory sounds could be plainly heard with stethoscope. The note was broncho-vesicular in pitch and the rate was carefully checked by watching chest excursions while the sounds were counted.

*Read before the South Carolina Medical Association, Florence, S. C., May 7, 1930.

Four associates were called to hear this unusual phenomenon of breath sounds in the arm and we were all absolutely sure that it was the transmitted breath sounds we were hearing. We discovered that this sound could also be heard but less plainly over the right arm along the brachial artery. Over the carotid arteries, abdominal aorta and the femoral arteries no such sounds could be heard. This sign persisted for three days during which time rœntgen plates of the chest were taken and these plates, together with clinical



(Fig. 1)—June 8th. Note greatly enlarged heart and increased density upper lobes of both lungs, especially of left lung.

study of the case provided us with what seemed to be a plausible explanation of this unusual physical sign (this will be discussed in closing paragraph.)

LABORATORY FINDINGS

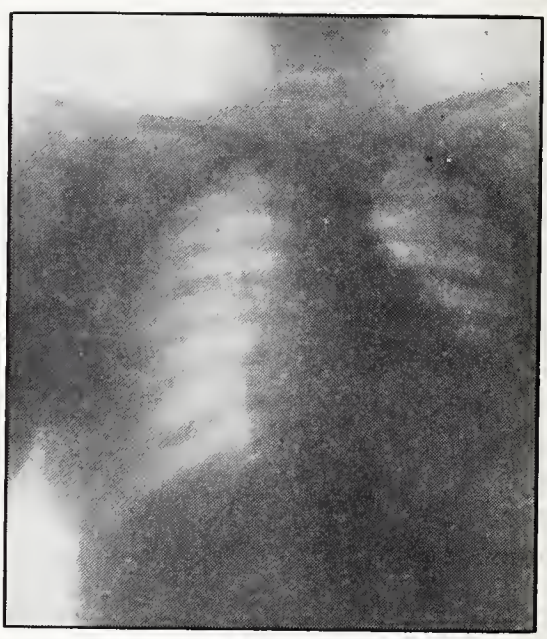
Urine scant; sp. gr. 1020; albumin, plus four; many fine granular casts, red blood cells and pus cells present. Blood: Red cell count 2,400,000 c.m.m.; white cell count 11,000 c.m.m.; hemoglobin 45 per cent; Wassermann reaction plus two; N.P.N. 121 mg. per 100 cc. June 8th, rœntgen plates of chest and fluroscopic study show heart greatly enlarged. (see Fig. 1) Upper lobes both lungs, especially left, much denser than normal. (June 17th) Rœntgen plates show cardiac enlargement less marked and both lungs of normal density throughout. (See Fig. 2)

COURSE

June 7, on admission one-fourth grain of morphine sulphate and one-fiftieth grain of atropine sulphate and one cubic centimeter of digifolene were given hypodermatically and repeated in what seemed to be the indicated dose every four to six hours. A few hours after admission twenty cubic centimeters of a 25 per cent solution of magnesium sulphate was given intravenously and one ounce of magnesium sulphate by mouth ordered to be given every two hours until free purgation began. One cubic centimeter salyrgan was administered intravenously a few hours later.

June 9—During the night free purgation and free diuresis occurred. Edema—general and pulmonary—was slightly improved. She vomited considerably.

June 10—Dyspnea, cough and edema be-



(Fig. 2)—June 17th. Note cardiac enlargement has decreased. Both lungs of normal density.

came better; there was less vomiting. She slept few hours at time; heart sounds were plainer. Breath sounds over brachial artery could not be heard.

June 11—No vomiting; bowels acting freely daily; appetite returning.

June 14—Comfortable; scarcely any cough; loud blowing systolic murmur at base and along side sternum heard for first time. Breath sounds over both lungs approaching normal. Carotids pulsating very forcibly.

June 17—Patient was discharged, eleven

days after admission to hospital and sixteen days after the acute onset of her illness. Anti-luetic treatment will be given by her family physician. Her condition was very much improved.

DISCUSSION

Our interpretation of this patient's clinical history and physical findings was that she had syphilis and aortic valvular disease with a resulting cardiac hypertrophy and vascular changes and very marked varicosity of left internal saphenous vein. She "got by" with all this handicap until the eighth month of pregnancy when the added stress of dual metabolism became the "straw that broke the camel's back." Toxemia of pregnancy plus decompensation of her aortic lesion produced pulmonary edema which furnished the classical "seed bed" for pulmonary emboli while the thrombosed saphenous vein furnished the "seed." The vascular crises which she experienced at beginning of labor must have been due to lodgment of clots from this thrombosed vein in branches of the pulmonary artery. Our Rœntgen plates indicated that corresponding branches of both pulmonary arteries were thus insulted as both upper lobes show a definite increased density.

The explanation of the unusual physical sign—respiratory sounds over brachial arteries for period of three days may be as follows: The heart was so enlarged that the lungs, especially the left lung, were pushed outward and upward. When the upper lobes were partially solidified by the infaction due to pulmonary emboli the resulting tubular breathing was transmitted to the subclavian arteries against which the lungs were crowded. When we recall that this patient had syphilis it was not unnatural that this sound would be transmitted down the fibrosed subclavian and axillary arteries to the brachial artery. When compensation was restored and cardiac enlargement decreased and the crowded condition therefore relieved this sign disappeared. The phenomenon was not due alone to the "crowded" state of the chest. This may be easily seen by referring to Fig. 3. This chest plate is that of a negress having an ovarian cyst which weighed 66 pounds. So great was



(Fig. 3)—Chest plate of negress having enormous ovarian cyst and resulting crowded chest.

the abdominal distention that her diaphragm was pushed up to the third rib anteriorly. Her heart and lungs too, were well nigh literally "in her mouth." While the lungs were crowded up several centimeters higher than normal above the clavicle into her neck, since they were not solidified but entirely normal in structure, and since the heart and vessels were normal, breath sounds were not transmitted down the subclavian and axillary vessels.

This question might be asked too: Might not this sign be present in diseases other than pulmonary embolism? While we have never found this sign save in this case, we believe that if the mechanical or physical elements—crowded chest, solidified upper lobe of lung, and sclerosed subclavian artery—be present that this sign may be looked for. These conditions might be present, for instance, in rare cases of pneumonia.

DISCUSSION

Dr. George R. Wilkinson, Greenville:

I think we are very much indebted to Dr. Young for presenting this observation that he has made. He wrote me and sent me a copy of the paper and asked me to give some sort of explanation of the finding. My report is very brief; I have no explanation of it.

The fact that you could hear this noise or sound over the vessels during the respiratory cycle and not during the cardiac cycle would lead one to believe that it must

(Continued on Page 318)

SURGERY

Wm. H. Prioleau, M.D., Charleston, S. C.

THE TREATMENT OF EMPYEMA IN CHILDREN

By Wm. H. Prioleau, M. D., Charleston, S. C.

Empyema in children continues to be attended with considerable morbidity and mortality. A great deal of this can be accounted for by treatment which is improper due to a lack of understanding of the factors involved. There have been many recent advances, some concerning the general care of the patient, and others concerning the drainage of the empyema cavity. Many of the drainage methods advocated are too complicated for general adoption, however, a simple one reported by Mr. Denis Browne appears to be worthy of our consideration.

It seems to embody most of the advantages of the other methods and no real disadvantages. It is described in detail in the Lancet of October 4, 1930, page 733, under the title "The Treatment of Empyema in Children." The following discussion is based upon this article.

The term Empyema means an abscess of the pleural cavity which is secondary to an infection of the lung. The abscess cavity has a tendency to become lined with dense fibrous tissue which hinders its obliteration. The main factors in the healing are the evacuation of the pus and the growing together of the v sceral and parietal pleural. Thus our efforts should be directed toward the emptying of the cavity and the expansion of the lung, thus opposing the pleural surfaces.

The evacuation of the pus is accomplished by making an opening through the chest wall into the pleural cavity. The effects of this opening depend upon existing conditions, and thus vary considerably. In a normal chest there would be an inrush of air followed by a partial collapse of the lung. This would be the case in an early Empyema before adhesions have formed. However in the later stages the pus is in greater volume and also under pressure so that it would be forcibly expelled. At times a free communication of the pleural cavity with the outside air is attended with such pressure changes on the mediastinal structures as to result in shock.

Should the empyema develop before the pneumonia has cleared up, the pleural cavity should be aspirated sufficiently often to relieve pressure. In the later cases satisfactory drainage must be instituted. To accomplish this two methods are in general use, the so-called "open" and the "closed." The open method consists in resecting a portion of a rib and inserting a rubber tube. Its disadvantages are that it is difficult to keep the tube in place, the operation is comparatively severe, there is a lack of control of the ingress of air and the egress of pus, and there is some danger of osteomyelitis of the ends of the ribs. Its advantages are that it affords free drainage and is simple of performance.

The closed method consists in the insertion of a small rubber tube thru a cannula. Its disadvantages are that it effects an incomplete emptying of the cavity, the tube is very often plugged with fibrinous exudate, the junction does not remain air-tight, and it does not permit of a thorough irrigation of the cavity. Its advantages are that it is a simple procedure readily borne by an ill patient and that it gives control over the flow of air and pus. Very often it has to be followed by a secondary operation.

The method advocated by the author is closed in principle however it is not attended with its usual disadvantages. It consists in making a two inch incision over the center of the cavity, not the lowest portion. The incision is carried between the ribs and two mushroom catheters are inserted into the empyema cavity. The wound is made air-tight by packing with vaseline gauze, no sutures are used.

The patient is placed on a canvas frame in which an opening has been made. The op-

erative field is placed over this opening thus the catheters drain the lowest part of the cavity. The outflow of pus can be regulated. The cavity can be thoroughly irrigated by pouring solution into one catheter and letting it flow out of the other; by this means there is no danger of increased pressure as when an injection is made through a single tube. Warm Dokin's solution should be used as it will tend to absorb the thickened wall. The tubes can be easily changed if they become plugged.

Breathing exercises should be encouraged. When the cavity holds only 10 cc. of fluid one tube is removed, and when only 5 cc. the other is removed. The remaining sinus closes rapidly.

The author's presentation is very convincing. The simplicity of the procedure is most reassuring. It is certainly worthy of a trial..

SOCIETY REPORTS

REGULAR MONTHLY MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY HELD IN THE LECTURE HALL, CITY HOSPITAL, NOV. 3, 1930.

The meeting was called to order by the President, Dr. Guess, at 8:00 P. M., with about forty members present.

The minutes of the last meeting were read and approved.

Reports of clinical cases were then called for. Dr. Davis reported a case of suprapubic prostatectomy. Radium was used in the bladder seven weeks previously, and when seen he had a very extensive radium burn. Dr. Davis stated that it was the general opinion among urologists never to apply radium to the surface of the bladder.

Dr. Carpenter reported a case of a baby who had had a "choking spell" and as there was a history of the child eating paper, bronchoscopy was done and no foreign body could be found. There was a generalized inflammation of the bronchi. The condition finally proved to be a primary pulmonary diphtheria which necessitated tracheotomy. No ulcerative areas were found. The child recovered.

Dr. Pollitzer reported a case of umbilical hernia. The child was pale, rachitic and malnourished and wore a truss. Dr. Pollitzer stated that the child should have been treated for its malnutrition to give strength to the muscles, rather than have the truss applied.

The President then called on Dr. Reeves who presented a very interesting paper on "Peptic Ulcer." Dr. Reeves first outlined the physiology of the stomach and duodenum, and stated that ulcer is likely to follow hyperacidity. Dr. Reeves stated that indiscretion in diet is usually to blame for hyperacidity, and that this condition affects the pyloric sphincter. The causes of peptic ulcer were mentioned as 1. Foci of infection and 2. Nervousness. Peptic ulcers usually occur in neurotic individuals with the ratio of four to one in men.

Symptoms of ulcer may appear in absence of ulcer and may be due to appendix or gall-bladder pathology. It was also mentioned that peritoneal irritation produces pyloric trouble and hyperacidity. The overproduction of acid in the stomach keeps an ulcer from healing. It is necessary for the pylorus to regurgitate its duodenal contents to neutralize some of the acid of the stomach; this is not possible if the pylorus is abnormal. Sippy recognized this phenomenon fifteen years ago.

Medical treatment of peptic ulcer should be tried first. Surgically, operation to neutralize acidity is gastro-enterostomy; operation to excise or enlarge pyloric sphincter has been very popular during recent years. The sphincter muscle should be taken out in part actually.

Dr. Reeves then showed some moving pictures, exhibiting in great detail the different operations for ulcers.

At the close of the scientific program, Dr. Furman commented on the long school hours at the City High School and asked for a discussion on the subject; discussed by Drs. Fair, Pollitzer, who suggested that a committee be formed to investigate the matter and report back. Further discussion was made by Dr. Carpenter, Boggs, Curran Earle, Bruce and Grimball.

Dr. Pollitzer moved that a Committee of three be appointed to investigate the present school hours and report back at a special call meeting of the Society; seconded and carried. Dr. Guess appointed the folllowing to serve on the Committee: Dr. Pollitzer, Chairman, Dr. Hugh Smith and Dr. Carpenter.

There being no further business, the meeting adjourned.

I. S. Barksdale, M. D.,
Secretary.

FOURTH DISTRICT MEDICAL ASSOCIATION MEETING, SPARTANBURG, S. C., OCTOBER 15, 1930.

PROGRAM

Invocation—Dr. W. H. K. Pendleton, Rector Episcopal Church, Spartanburg, S. C.
Address of Welcome—Mr. Ben Hill Brown, Mayor of Spartanburg.
Greetings—Dr. C. Williams Bailey, Spartanburg.
Response—Dr. E. A. Hines, Seneca, S. C.
President's Address—Dr. L. G. Clayton, Central.

SCIENTIFIC PROGRAM

1. "The Science of Medicine vs. the Art of Practice" Dr. Kenneth M. Lynch, Pres. S. C. Medical Association.
2. "More Babies and Better Babies" Dr. Frank Howard Richardson, Black Mountain, N. C.
3. "Some Observations on Endocrine Therapy" Dr. J. G. Murray, Greenville, S. C.
4. "Report—1st. Massive Emphyzema from Foreign Body in the Lungs. 2nd. Esophageal Stricture. Dr. E. W. Carpenter, Greenville, S. C.
5. "Benign Prostatic Hypertrophy"—Moving Pictures, Dr. T. M. Davis, Greenville, S. C.
6. "Epidermophytosis" Dr. C. P. Corn, Greenville, S. C.
7. Case Report—"Vacillating Blood Pressure" Dr. W. T. Lander, Williamston, S. C.
8. "Pediatric Pointers" Dr. R. M. Pollitzer, Greenville, S. C.
9. "Vegetable Foreign Bodies in the Lungs"—Report of five cases, Dr. Wm. B. McWhorter, Anderson, S. C.
10. "The Life Situation as a Factor in the Chronic Diarrheas" Dr. George R. Wilkinson, Greenville., S C.
11. "The Paranasal Sinuses" Dr. J. T. Carter, Spartanburg, S. C.
12. "How An Eye Was Saved by Plastic Surgery" Dr. L. O. Mauldin, Greenville, S. C.
13. "A Report of June 1930 Meeting American Proctologic Society, Buffalo, N. Y., Dr. Thomas Brockman, Greer, S. C.

Meeting was held in the ball room of the Cleveland Hotel.

Luncheon 2:00 P. M., same Hotel.

Governor-Elect, Hon. Ibra C. Blackwood, and U. S. Senator-Elect, Hon. James F. Byrnes, will make talks at the luncheon hour. A quartet will furnish the music, and altogether we hope to have the greatest session the Fourth District has ever enjoyed. Be sure to come.

President.....L. G. Clayton, M. D. Central, S. C.
Vice-President.....Frank Lander, M. D. Williamston, S. C.
Sec'y-Treas.....Wm. A. Strickland, M. D. Westminster, S. C.

PICKENS COUNTY MEDICAL SOCIETY MEETS

On Wednesday, Nov. 5, the Pickens County Medical Society met at Dr. Peek's Hospital at Six Mile.

The meeting was well attended, the program interesting throughout, with special reference to clinical cases presented by Dr. L. G. Clayton, Central.

Refreshments were served by Mrs. Peek, assisted by the nurses, which added greatly to the pleasure of the meeting.

After the society had completed its session, a meeting of the hospital staff was called and a number of members were added.

The staff now stands:
President: Dr. D. E. Peek.
Superintendent: Mrs. Nell Dillard, R. N.
Secretary: Dr. J. L. Bolt.
Members: Doctors, W. B. Furman, P. E. Woodruff, W. M. Long, W. A. Sheldon, J. L. Valley, J. C. Pepper, W. A. Tripp, C. M. Tripp, L. G. Clayton, J. W. Potts, E. F. Wyatt, J. D. Bearden, and R. Kirksy and E. J. Bryson.

J. L. Bolt, Sec'y.

ANDERSON COUNTY MEDICAL SOCIETY MEETS

The October meeting of the Anderson County Medical Society was held at the John C. Calhoun Hotel, Wednesday, October 8, 1930, 12 noon. The meeting was called to order by the President, Dr. Thos. R. Gaines.

The minutes of the September meeting were read and adopted.

Resolutions as a tribute to memory of the late departed member Dr. John Fletcher Shirley were read before the Society.

Dr. T. W. Ayers who has recently returned from China was guest of the Society and gave a very interesting talk of the work being done in China by the Medical Missionaries. He mentioned some very common diseases occurring there, one being "Sprue", another the "Pulmonary Plague," this disease causing a gangreous condition in the lungs. He stated the Rockefeller Hospital situated at Pecan, was very similar to the Johns Hopkins Hospital. Dr. Ayers talk was enjoyed by all, he being a very interesting speaker.

Dr. D. J. Barton read a paper on "Congenital Pyloric Stenosis;" Dr. S. C. Dean presented the operative treatment.

The discussion was led by Dr. J. B. Latimer, others joining in the discussion were Drs. H. W. Corbett, Dr. W. T. Lander, Dr. E. O. Hentz, and Dr. C. S. Breedin.

The meeting adjourned for luncheon.

The following members were present:
Drs.Bare, Barton, Breedin, Burton, Corbett, Chambers, Daniel, Dean, Donnald, Epting, Gaines, Henry, Hentz, Hobson, F. M. Lander, W. T. Lander, Latimer, J. W. Martin, Lee Milford, McWhorter, Wade Thompson, H. B. Williams, J. R. Young, and Dr. Creech who has

recently located at Honea Path, S. C.

D. J. Barton, M. D.
Sec'y-Treas.

WHEREAS: It has pleased Almighty God in His infinite wisdom, to remove from our midst our friend and colleague, Dr. John Fletcher Shirley—

WHEREAS: We the members of Anderson County Medical Society desire to place on record our testimony of love and appreciation in which Dr. Shirley was held by us; therefore be it resolved:

First: That in his passing we have lost one of our most devoted members, our county and the town of Honea Path one of its truest and most loyal citizens.

Second: That while we deplore this loss, we bow in humble submission to a Higher Power.

Third: That a page in our minutes be inscribed to his memory and that a copy of these resolutions be sent to his bereaved family, and to the Journal of the South Carolina Medical Association.

Signed D. J. Barton
J. R. Young
Frank Wrenn
Committee from Anderson
County Medical Society

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL, WEDNESDAY EVENING, NOVEMBER 12TH, 1930, AT 8:30 O'CLOCK

The meeting was called to order by the President, Dr. J. Sumter Rhame.

Present: (11) Doctors Banov, Bold, Burn, Cain, Lynch, Martin, F. R. Price, Ravenel, Rhame, Rutledge, W. A. Smith, Whaley, Cannon.

Guests: Dr. C. A. Strong, of Iowa; Dr. and Mrs. Farrow of the U. S. S. Dobbin.

The minutes of the meeting of October 28th were read and confirmed.

Under Miscellaneous Business, the matter of the program for the Annual Meeting was discussed. It was moved, seconded and carried that the Program Committee be instructed to procure a suitable speaker for this occasion. Several suggestions were made as to who might be selected, but it was left in the hands of the Committee to choose the speaker.

At 9:00 P. M. the Scientific Program was called. The program consisted of a series of case reports.

Dr. Edward Rutledge reported an unusual case of pulmonary embolus. This was discussed by Drs. Lynch, Martin, F. R. Price and W. A. Smith, Dr. Rutledge closing.

Dr. T. H.Martin reported a case of mesenteric cyst. This was discussed by Dr. Ravenel and Dr. Whaley, Dr Martin closing.

Dr. F. G. Cain reported three cases of appendicitis, each of which presented unusual symptomatology. These were di cussed by Doctors Burn, Lynch, and Price, Dr. Cain closing.

Dr. J. H. Cannon reported a case of acute yellow atrophy of the liver, resulting from having taken cincophen for chronic arthritis. This was discussed by Dr. Burn and Dr. Cain.

There being no further business, the meeting adjourned.

W. Atmar Smith, M. D.
Secretary.

SOUTH CAROLINA EYE, EAR, NOSE AND THROAT SOCIETY

Meeting at Columbia, S. C., January 14, 1931, 10 A. M.

1. Dr. J. F. Townsend, Charleston, S. C.
   "Demonstration of Audiometer."
2. Dr. W. B. McWhorter, Anderson, S. C.
   "Nasal Sinus Infection."
3. Dr. Rosa H. Gantt, Spartanburg, S. C.
   "Traumatic Glaucoma in Child." Case Report.
4. Dr. J. R. Dunn, Sumter, S. C.
   "Common Diseases of the Orbit." Slides.
5. Dr. S. R. Lucas, Florence, S. C.
   Case Report.
6. Dr. S. B. Fishburn, Columbia, S. C.
   "Penetrating Wound of the Eye."

Adjournment for Lunch

Address by Dr. Gabriel Tucker, University Penn. "Diseases of the Larynx with Emphasis on Malignancy." Moving Pictures.

COLUMBIA MEDICAL SOCIETY MEETS

Regular scientific meeting of the Columbia Medical Medical Society called to order by the president, J. Heyward Gibbes, at 8:30 P. M., November 10, 1930.

Minutes of last regular scientific meeting read and adopted.

Under clinical cases Dr. W. R. Barron presented a very interesting case that had been running a septic temperature curve for some time. Woman had a urinary blockage as was demonstrated with X-ray. Operation showed an S shaped kink due to adhesions. This was the fourth day after operation and she was doing well.

Dr. Hugh Wyman presented a case of arthritis who appeared in person. Dr. Draffin demonstrated pulp stone formation in the teeth. It was probably a blood stream infection. Suggestions from the members of the society were in brief, proper exercises, rest, and diet in treatment of the case.

Dr. Ernest Cooper gave a very interesting paper on Childhood Tuberculosis that was favorably received. Discussion opened by Dr. Weston, Jr., also discussed by Dr. Madden, Dr. Fouche, Dr. Routh, and Dr. Gibbes. Paper closed by Dr. Cooper.

Thirty members present and two visitors.

Society adjourned at 9:50 P. M.

Respectfully submitted,

William Weston, Jr.

COLUMBIA MEDICAL SOCIETY MEETS

November 24th, 1930.

Meeting called to order by the President, J. Heyward Gibbes at 8:30 P. M., November 24, 1930.

Minutes of the last regular business session read and adopted.

Dr. Pitts reported a committee to investigate the advisability of accepting the group automobile insurance plan as presented to the society by David G. Ellison. The committee after its investigation recommends its adoption.

Motion made that the society accept this group insurance plan to enter or not enter as each individual sees fit. Motion seconded and passed.

Dr. W. R. Barron moves that collectors not be permitted to use Columbia Medical Society stationery, motion passed.

Dr. Routh moves that committee to draw up suitable resolutions in connection with Dr. Bonner of State Park. Motion passed. Dr. Routh and Dr. Pitts appointed.

Clinical pathological conference case presented by Dr. Madden as probable coronary thrombosis. Case was discussed by Dr. Mayer and Dr. Stewart and closed by Dr. Plowden showing a very interesting case of dissecting anuerism of thoracic aorta. He stated that anuerism was almost 100% syphilitic origin. Only other case was traumatic to these causative factors Dr. Gibbes said that hypertension was a causative factor. Dr. Plowden closed the discussion. Dr. Taylor showed a pathological specimen of osteomyelitis of the humerus.

Twenty-eight members present. Society adjourned at 9:25 P. M.

Respectfully submitted,
William Weston, Jr.
Secretary.

PEE DEE MEDICAL ASSOCIATION HELD AT BENNETTSVILLE, S. C., TUESDAY, NOV. 18TH 1930 AT 10:00 A. M., MASONIC TEMPLE

10:00 A. M.—Meeting called to order by the President, Dr. Rembert J. Coney, Cheraw, S. C.

Reading of Minutes—Dr. S. C. Henslee, Sec'y, Dillon, S. C.

Papers

1. Education in Medicine—Dr. Kenneth M. Lynch, Charleston, S. C., President of the South Carolina Medical Association.
2. Pellagra—Dr. R. L. Gardner, Chesterfield, S. C.
3. The Relationship between Oral Sepsis and Accidents and Disasters of Pregnancy—Dr. Robert E. Seibels, Columbia, S. C.
4. Larva Migraus (creeping eruption)—Dr. Frank K. Rhodes, Florence, S. C.
5. Tuberculosis in Childhood—Dr. Ernest Cooper, State Park, S. C.
6. Some Aspects of the Problem of Cancer of the Stomach—Dr. J. Shelton Horsley, Richmond, Virginia.
7. The State Board of Health—Dr. William Egleston, Hartsville, S. C.
8. Safeguards to Cataract Estraction—Dr. Henry L. Sloan, Charlotte, N. C.
9. Medical Values; An Extimate—Dr. Jamie A. Norton, Conway, S. C.

REGULAR MONTHLY MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY, HELD AT THE WILFRED CAFETERIA, MON., OCT. 6TH, AT 8:30 P. M.

This meeting was held in the form of a very enjoyable banquet given by the Society in honor of Drs. Olin B. Chamberlain of Charleston, and William P. Beckman of Columbia. About sixty members and guests attended.

Invocation was given by Dr. Carpenter.

Following the supper, the President, Dr. Guess, introduced Dr. Chamberlain who presented a very interesting paper, "Post-Encephalitic Psychiatric Problems." Dr. Chamberlain first stated that Encephalitis is a very remarkable and bizarre disease that has been very prevalent in the South since 1917. It has been called the cerebral poliomyelitis. The pathology is manifested by small round cell infiltration of the basal ganglia as well as any area of the brain, with no pus-formation, after which the brain undergoes definite degenerative changes.

There are five types of psychiatric interest that usually follow Encephalitis, namely, (a) The Temper Type, (b) The Slow Cerebration Type, (c) Depressed Type, (d) the Paranoic Type, and (e) The Apache Type. Dr. Chamberlain then read a number of very interesting case histories which were illustrative of these five types. The Apache type may drift into the Parkinsonian type. It was also mentioned that bad people may be changed into good following an attack of Encephalitis.

Prognosis, Course and Treatment.

Childhood cases have good chances of recovery; a more conservative figure of all cases being 35 per cent. Treatment. Hyoscine and other sedatives are indicated, hospitalization; some cases seem to do better at home. Much good can come from treatment if administered properly.

The president then called upon Dr. William P. Beckman who presented a very able and informing paper on "The Psychiatric Responsibility of South Carolina Physicians."

Dr. Beckman first reminded us that many people may never develop adult minds; one out of every twenty-six babies will become insane. Seventy thousand people are admitted to institutions each year as new patients, and this figure does not include epileptics, neuraesthenics and the feeble-minded. This number will not be diminished.

In 1925, 805 new patients were admitted to the S. C. State Hospital, and 1,325 in 1929. The tendency to increase is widespread over the country everywhere. In the next ten years, Dr. Beckman stated that there will be over 10,000 patients admitted to our Hospital

at Columbia, and for this reason, we owe it to the State, our efforts to curb this increase. The following table gives some idea of the kinds of cases admitted at Columbia in 1929, with the numbers of each:

	No. Cases
Senile	58
Cerebral Arterio-sclerosis	55
General Paresis	56
Cerebral Syphilis	2
Psychosis from Brain Tumor and other Brain and Nervous Diseases	8
Alcoholic Psychosis	13
Drugs	4
Pellagric Psychosis	172
Manic Depressive	169
Involutional Melancholia	17
Dementia Præcox	9
Epileptic	45

Many patients leave the Hospital without diagnoses of psychosis; there were 128 such cases last year who were sent back to their homes. Twenty alcoholics were sent out.

The Pellagric Psychoses should by all means be checked; many of these die in the State Hospital because they wait too long before they come in. This death rate is equal among the whites and blacks. Dr. Beckman then stated that it is too early to say that many cases of mental disease may be prevented. The cost of maintenance of the State Hospital is approximately one-tenth of the annual State appropriation.

The scientific program having been disposed of, a few items of business were brought up. Dr. Murray brought up the subject of leniency of the police with physicians in regards to the City speed laws. Discussed by Drs. White, Evatt and Curran B. Earle who moved that Dr. Murray and a Committee appear before City Council in protest of the Recorder's action against Dr. Evatt, and to ask for a remission of the fine and an apology from the Recorder or his resignation. Discussed by Dr. Grimball. Seconded by Dr. Furman and carried.

Applications for membership in the Society from Drs. Nachmann and Crooks were read; it was moved, seconded and carried that these applications be referred to the Board of Censors.

A communication from Mrs. L. O. Mauldin, President of the Woman's Auxiliary of the County Medical Society regarding the appointment of an advisory committee to the Auxiliary was read. The President appointed the following members to serve on this Committee: Drs. Anderson, Murray and Bruce.

There being no further business, the meeting adjourned.

Irving S. Barksdale, M. D.

Secretary.

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL, TUESDAY EVENING, OCTOBER 28TH, 1930, AT 8:30 O'CLOCK

The meeting was called to order by the Vice-President Dr. Henry W. de Saussure.

Present: Doctors, Beach, Bowen, Byrnes, Cannon, Deas, de Saussure, Jenkins, F. B. Johnson, McInnes, Maguire, Mitchell, O'Driscoll, Prioleau, R. B. Rhett, W. M. Rhett, Richards, Rutledge, Sanders, Scharlock, W. A. Smith, W. H. S. Speissegger, Sughrue, Taft, Waring, Whaley, I. R. Wilson, I. R. Wilson, Jr. (27)

Guests: Major E. Blacksheer, of Fort Moultrie, Dr. Stenhouse and Dr. Stevens, of the Navy Yard, Dr. Roe E. Remington, Dr. Culbreath, internes, and senior medical students.

The minutes of the meeting of October 14th were read and confirmed.

There was no business to be conducted by the Society.

The recess was taken until 9:00 P. M., at which time the Scientific Program was called.

Dr. D. L. Maguire presented a case of head injury. This was discussed by Dr. Rutledge, Dr. Chamberlain, and Dr. Townsend, Dr. Maguire closing.

Dr. O. B. Chamberlain gave a clinic on Neuro syphilis, and exhibited patients suffering with various types of nervous involvement resulting from syphilis. The clinic was discussed by Doctors Rutledge, F. B. Johnson, W. A. Smith, Cannon, W. M. Rhett and Sanders, Dr. Chamberlain closing.

Dr. Roe E. Remington read the following very interesting account which appeared in the "South Carolina Gazette" of September 27, 1770. He stated that this article had been drawn to his attention by Dr. J. I. Waring, and it seems to illustrate the old saying that "there is nothing new under the sun.'

From THE SOUTH CAROLINA GAZETTE, No. 1825, Thurs., Sept., 27, 1770.

The following is the proposal that was made to the public, and found, by the learned Committee, appointed by the Honorable House of Assembly, to be too premature:

As dangerous and irregular methods, in the practice of physic, are followed in this province, from the want of a general pharmacy; the subscriber proposes to the public, the necessity and expediency of constructing a laboratory, chemical and galenical, for the safety and preservation of the patient, and credit of the physician; as therein he will find medicines proper and adequate to all cases, which cannot be had in private collections. He will join with the other methodical practitioners in town, to prove the inconveniences they labor under, and the advantages of which the public are deprived. By not having a general pharmacy, physicians are obliged to conform to the common irregular methods, having no other Materia Medica than those imported to Great Britain, in general so adulterated that the best prescriptions may be rendered ineffectual, and probably very dangerous. Without a pharmacy, the physician cannot exercise his speculative faculty, to find various

compositions, or simple substances, adapted and natural to this climate, or correctives for vapoural impressions, emanating in particular from this soil; neither can he exert himself in the analysis of the abundant quantity of vegetables, animals, and minerals peculiar to this soil, in order to extract substances pure and fit for use. With intention then, not only to analyze all the natural productions, and to find genuine preparations of all kind, he humbly requests the honorable House of Assembly to take under consideration if the establishing a general pharmacy, and collecting a botanic garden, would not be the most effectual means for regulating the practice of physic, and surest to prevent partiality; and encourage from all parts of the world, the Republic of the Literati to concur with their advices, to be judiciously examined by your composite society. As the opening of a botanic garden, without a chemical laboratory, in order to discover ,by analysis, the nature and effects of simples or materials unknown, will be to the public an useless expense: the subscriber therefore takes the liberty to offer himself for the direction of the laboratory, chemical and galenical; and when erected, to collect, analyze, and read the general system of the Materia Medica: but in case there should be found a director and lecturer, of superior knowledge in this most essential part of physic, after the construction of the said laboratory, he, the said subscriber will then be ready to resign in his favor.

It remains to acquaint the Honorable House that the cost of implements, vessels, utensils, glass, and metalics, apparatus, furnaces, and all other inside work, with some materials for the beginning, will amount to between six and seven thousand pounds currency. Should this proposal meet with opposition, the subscriber, having already part of the apparatus, will on his own account, undertake to complete the pharmacy, if the public will favor him with the loan of six thousand pounds currency. With this advanced, he proposes to admit as students and apprentices, any young men, having an inclination and sufficient education; and shall also make known the time when he is to perform any capital operation. The pharmacy being completed, the advantages arriving from a botanic garden, will clearly appear."

Dr. Remington stated that he had written to Mr. A. S. Salley, of the Historical Commission, about the matter and he read the letter which he had received from Mr. Salley, which follows:

Historical Commission of South Carolina
Columbia, S. C.

October 10th, 1930

Dr. Roe E. Remington,
Charleston, S. C.
Dear Dr. Remington:

The physician who presented the petition in regard to establishing an experimental pharmacy for the province of South Carolina was Dr. Lewis Mottet. His petition was presented to the Commons House of Assembly, November 30, 1769. It was referred to a committee consisting of Messrs. John Parker, Thomas Ferguson, James Parsons, Christopher Gadsden, William Skirving and Colonel George Gabriel Powell.

The proceedings of the two houses of the Genera Assembly on the petition could be followed for nearly a year until the matter was disposed of as shown in the extract from the "South Carolina Gazette" of September 27, 1770, which you sent me a copy of.

Yours very truly,
A. S. Salley

There being no further business, the meeting adjourned.

W. A. Smith, M. D.
Secretary

KERSHAW COUNTY MEDICAL SOCIETY MEETS

The Kershaw County Medical Association held its regular monthly meeting and dinner, November 12, and it was a rainy night. Nine were present and four absent.

Dr. Turner of Kershaw brought up the subject of Intestinal Toxemia of Infants, and the Nomenclature, cause, treatment and sequelæ were freely discussed by all present.

The subject of expert testimony in court was also discussed, the question of the certification of textbooks, or monographs on any subject being emphasized. It was agreed that a doctor should be very careful in swearing that any book, by any man, however prominent in the profession, was absolute authority on any subject.

J. W. Corbett, M. D.
Corresponding Secretary.

REGULAR MONTHLY MEETING OF THE GREENVILLE COUNTY MEDICAL SOCIETY HELD IN THE LECTURE HALL, CITY HOSPITAL, MON., DECEMBER 1st, 1930

The meeting was called to order by the President, Dr. Guess at 8:00 P. M. with about fifty members and guests present. The minutes of the last meeting were read.

Reports of clinical cases were then called for. Dr. Tyler presented a case of rigidity of abdomen in a young man 28 years of age. The abdomen was opened and the duodenal contents were found escaping through a small hole into the abdominal cavity. Repair was done. The patient had a severe coughing spell, which reopened the abdominal wound; repair was done at once and recovery was the result. Dr. Tyler's second case was that of a little boy ae. about seven years, who had a rather severe purpura. X-ray examination revealed a lung abscess. Operation and drainage was done under novocaine and N2O anaesthesia. Improvement was steady. Discussed by Drs. Jervey, Jr., Simmons, Pollitzer who described the kidney condition that followed the lung abscess.

The President then introduced the speaker of the evening, Dr. Ruth J. Frank of Spartanburg who was the Society's guest of honor. Dr. Frank's

subject was "Medical Work in India." She began by describing some of her experiences in Arabia, and mentioned two very interesting cases which she encountered.

In speaking of the work in India, it was stated that the relations of the Presbyterian missionaries were very pleasant with British and Indian authorities.

The peculiar customs in reference to the sick people in a family were described.

It is the custom in medical practice in that land to give drugs by the most direct and quickest routes and for that reason intravenous medication is the method of choice.

Dr. Frank next described some of the extreme insanitary conditions as existing in India.

Malnutrition is one of the most common conditions that is met in medical practice; intestinal parasites are also very common, and the de-worming of patients admitted to the hospital is a routine procedure. Cerebral and malignant malaria are very common, necessitating intravenous quinine; amoebic dysentery, plague and cholera are all too common. Dr. Frank mentioned that "when a rat falls" the population of a community clears out and scatters all over the countryside, as this is a timehonored indication of an outbreak of the plague. When cholera is prevalent, it becomes the practice in the hospital to boil all water, abstain from the eating of raw fruits and vegetables, etc. Dr. Frank cited a case of cholera contracted by eating a bunch of fresh grapes. Cholera treated early with intravenous saline yields very encouraging results.

Tuberculosis is on the increase in India. In the Bombay area there are only 150 beds, and there should be at least 15,000. The natives sleep indoors with closed windows even in the hottest months of the year; this is a contributing factor in the increase of the tuberculosis rate.

Obscure poisoning cases are very common in hospital work. Dr. Frank concluded her very interesting talk by relating some of her obstetrical experiences.

Under the head of old business, Dr. Murray gave the report of his committee appointed to protest the recent action of the City Recorder against one of the members of the Greenville County Medical Society; it was moved, seconded and carried that the report be received as information.

Dr. Davis moved that the call meeting to consider the report of the School Committee be held after the regular meeting; seconded and carried.

Dr. Evatt stated that Drs. Nachmann and Crooks had been duly registered at the Office of the Clerk of Court. Dr. Davis moved that Drs. Nachmann and Crooks be elected members of the Society; seconded and unanimously carried.

The next order of business was the election of officers for 1931. The results of the election were as follows: President, Dr. Barksdale; Vice-President, Dr. W. S. Fewell; Treasurer, Dr. Hugh Smith; Secretary, Dr. Jack D. Parker.

Dr. Tyler moved that Dr. Fair be re-elected to the Board of Censors, seconded and carried.

Dr. Wilkinson nominated Dr. W. T. Brockman as Delegate to the State Convention, and Dr. Hugh Smith nominated Dr. Davis; Dr. Fair moved that nominations be closed; seconded and carried, and the unanimous vote for Drs. Brockman and Davis was cast.

There being no further business, the meeting adjourned.

I. S. Barksdale, M.D., Secretary.

SPARTANBURG COUNTY MEDICAL SOCIETY

Dr. Baxter Haynes is dead. Worn and wearied by a struggle with an implacable foe, with never a hope of respite in the future and never a gleam of light in the years to come he gave up in despair and bade the world farewell. Loving life with all his heart, finding greatest happiness in giving pleasure to others, making friends where'er his footsteps led, speaking ill of no man nor thinking evil, surely, the tragedy was not in his death but in the black horrow of the days and nights that came before.

This Society is grieved and joins the legions of his friends in extending sympathy to his loved ones. Our hearts go out to him across the void, deep as it may be, and dark, and pray that his wearied, harried soul may have found rest.

J. J. Lindsay, Chairman
George Thompson
A. R. Fike,
Spartanburg County Medical Society.

PROCEEDINGS OF THE REGULAR MEETING OF THE MEDICAL SOCIETY OF SOUTH CAROLINA, HELD AT ROPER HOSPITAL TUESDAY EVENING, NOVEMBER 25th, 1930, AT 8 O'CLOCK

The meeting was called to order by the President, Dr. J. Sumter Rhame.

Present: Doctors: A. E. Baker; A. E. Baker, Jr.; Beach; Beckman; Bowen; Bowers; Byrnes; Cannon; Chamberlain; Deas; de Saussure; Finger; W. H. Frampton; Hope; Jenkins; McCrady; Mood; O'Driscoll; Palmer; E. F. Parker; F. L. Parker; Pearlstine; F. R. Price; W. H. Price; Prioleau; Rhame; R. B. Rhett; Richards; Rutledge; W. A. Smith; W. H. Speissegger; Taft; Waring; Wild; Robert Wilson. (35).

Guests: Dr. J. Heyward Gibbes, of Columbia, S. C.; Dr. T. M. DuBose, Jr., of Columbia; Doctors A. E. Beddoe and H. V. Cornett of the U. S. Navy; Dr. C. B. Woods and Dr. P. M. Temples of tho Medical College; Dr. R. E. Remington; internes and senior medical students.

The minutes of the meeting of November 12th

were read and confirmed.

Dr. A. R. Taft requested information as to the eligibility of Dr. Black of Beaufort and Dr. Brown of Walterboro for membership in this Society, they being members in their own county Society, but anxious to affiliate themselves with this body. This was referred to Dr. J. H. Cannon, Councillor for this district, to report at the next meeting of the Society.

Under the head of Nomination of Officers, the following were nominated, and their nominations seconded:

For Secretary, Dr. W. Atmar Smith.

For Treasurer, Dr. J. H. Cannon.

For Librarian, Dr. W. C. O'Driscoll.

For Member of the Board of Commissioners, Dr. C. McF. Mood.

Dr. Mood, on being nominated, stated that he had been honored on three previous occasions and had served as a member of the Board of Commissioners for fifteen years. He spoke highly of the honor and his appreciation of it, but said that he would like to be relieved of it, and requested that his name be withdrawn. Dr. E. F. Parker moved that the nomination be made unanimous and that Dr. Mood be requested to serve for another term. This was seconded and carried. Dr. Mood accepted the nomination.

For delegate to the State Association, Dr. T. E. Bowers was nominated and seconded.

The following were nominated and seconded for alternates: Dr. J. W. Burn, Dr. J. E. Smith, Dr. J. J. Ravenel, Dr. W. H. Prioleau and Dr. R. L. McCrady.

The Secretary stated that Dr. James Frampton of Mount Pleasant and Dr. William Henry Johnson of Charleston had been members of this Society for twenty-five years and were eligible for election to Honorary Fellowship. Dr. Frampton and Dr. Johnson were then nominated to be Honorary Fellows.

The Scientific Program was called at 9:00 P.M.

Under case reports, Dr. Robert Wilson reported a case of pernicious anaemia, outlining the symptoms and the treatment prescribed. This was discussed by Dr. Chamberlain.

On request of the President, Dr. Robert Wilson introduced the speaker of the evening, Dr. J. Heyward Gibbes of Columbia, President of the Columbia Medical Society. Dr. Gibbes presented a very interesting and able paper on the Treatment of Secondary Anaemia.

There being no further business, the meeting adjourned.

W. Atmar Smith, M.D.,
Secretary.

EYE, EAR, NOSE AND THROAT

J. F. TOWNSEND, M. D., F. A. C. S., CHARLESTON, S. C.

AUDITORY NERVE DEAFNESS

Dr. A. Schattner

The Laryngoscope, November, 1930, page 802

The name auditory nerve is a misnomer, but has been kept in the medical literature because the main function of the eighth nerve is auditory, the vestibular division having been discovered at a later date, at which time the term auditory had already become popular and synomymous with the eighth nerve.

From a clinical standpoint we should speak of auditory and vestibular nerve apparatus.

Both rami cochleares distribute fibres to each temporal lobe. Disturbances of hearing of a high degree are not induced by diseases of the cortex.

The relations of the ramus vestibularis are not so complicated. The vestibular nerve apparatus consists of three neurons. Dieter's nucleus is now looked upon as a nucleus of coordination, having relations on the one hand to the cerebellum and the vestibular nerve and on the other to the nerves of the muscles of the eye and of the cervical muscles, explaining clearly the important role it plays in reference to the perception of our position in space and to the occurrence of nystagmus.

The auditory nerve possesses the greatest impressionability of all the cranial nerves, that is, its function is much more often arrested by general disease and chemical changes in the blood during infectious disease than that of the optic, gustatory, olfactory and sensory nerves.

1. In the membranous internal ear two organs of very different phylogenetic age are paired. The labyrinth proper, that is, the utricle and semicircular canals, takes its origin deep down in the animal kingdom, even non-

vertebrates possessing a labyrinth called statocyst; furthermore, some plants reveal cellular organs which are homologous to the statocyst.

The cochlea appears much later and is first found in amphibia, reptiles, birds and mammals.

It is an established fact that the resistance of an organ increases with its phylogenetic age and, therefore, it is easily understood, that the same congenital injury may leave the labyrinth unchanged, whereas the cochlea may be impeded in its development.

2. The second factor of vital importance is revealed by the histological findings of the end-organs. The auditory end-organs consist of much smaller and more delicate cellular elements and nerve fibres than does the end-organ of the vestibular nerve. The resistance of an organ to injury is decreased in proportion to the delicacy of its cellular elements.

Diseases of the internal ear are met with more often in children than in adults. This is explained by the fact that diseases, such as the acute exanthemata, diphtheria, acute hydrocephalus, epidemic cerobrospinal meningitis, etc., which occur so frequently in children are often associated with affections of the ear. More over, it must be pointed out that the anatomical connections between the middle ear, labyrinth and cranial cavity are more numerous in children than in adults, and further, that by means of aqueducts there is a more extensive communication between the fluids of the labyrinth and the cerebrospinal space in children than in adults.

The frequence of affections of the auditory nerve diminishes in middle age, but increases again considerable in the later years of life, even after the sixtieth year. The anatomical causes of this disturbance of hearing in old age, in addition to changes in the labyrinthine capsule which lead to ankylosis of the stapes (otoscleosis), are due to retrograde changes in the auditory nerve and its terminations (senile degeneration), such as atrophy, fatty degeneration and chronic endarteritis.

Statistics of affections of the auditory nerve are sparse and unreliable. That these affections occur more frequently in males may be explained by the fact that they are more exposed to harmful influences of certain occupations. Both ears are usually affected.

Alexander states that in his experience the percentage of congenital deafness is slightly less than that of the acquired form. This however, varies greatly in different regions, where factors such as endemic cretinism come into play.

This group is again subdivided into: a. Fetal, caused by trauma, lues and acute infections. b. Postfetal following trauma. Here a variety of clinical pictures present themselves.

Mechanical trauma may be due to the action of intense sounds (explosions, detonations), indirect injury to the labyrinth, injuries to the skull (fall on the head, fall, blow and concussion), and injuries to the labyrinth occasioned by sudden changes of air pressure, as in caisson workers, aeronauts and divers. The majority of aural affections in caisson workers occur during the stage of decompression if this is carried out too rapidly. Without going into a description of the tympanic lesions it is important to note that gas emboli, due to the presence of gas in the blood in caisson disease or analogous occupations, may cause permanent disturbances of hearing through ischemia, and local destruction of the central fibres of the auditory tract, of the auditory nerve and of its branches. We must also add here labyrinthine disturbances in hearing which are caused in persons who have certain occupations, such as blacksmiths, locksmiths, plate workers, coppersmiths, coopers, engineers, stokers, etc. Temporary or permanent disturbances of hearing following certain affections of the mind are explainable upon the basis of the vasomotor nerve mechanism.

Drugs may also cause auditory nerve lesions, as: quinin, salicylic acid, morphin, chloroform, tobacco, alcohol and the oil of chenopodium. Other toxins, as: lead, mercury, arsenic, carbon disulphid, anilin preparations and phosphorous. Metabolic disturbances and deficiency of vitamins should also be considered.

Meningitis as from meningococcus, tuberculosis, congenital syphilis or from traumatism, following fracture of the petrous bone. Another group of causes are found in acute infections where one may have a serious or a

diffuse purulent labyrinthitis in which the internal ear is invaded by metastasis. Mumps also may affect the auditory nerve.

Chronic infections cause auditory nerve lesions, as from focal infections of the tonsils, teeth, and elsewhere in the body or syphilis, especially the later form of syphilis, as is shown by the rapid development of disturbances of hearing.

Rickets also is a causative factor, but we have few pathological observations on this variety.

PRESIDENT'S PAGE

(Continued from Page 298)

To one associated with State medical education in South Carolina from its beginning the story of its progress is inspiring. It has fought its way without outside help. The great moneyed philanthropies which have so favored many of its competitors have not seen fit to make its path less stony that its progress might be less impeded. It has grown with honor but with a yearning for a better opportunity to give that larger, greater service of which it is consciously capable.

We have not traveled very far in providing the opportunity for the more complete development of leadership, always necessary for the advance of civilization but more conspicuously so now, in the ever increasing rapidity of change in modern conditions. Leaders may be born, not made, but they need the proper conditions for their development if the full fruit is to be born. That is biologically sound.

It may, in a sense, be unbecoming of a member of a Faculty to speak in this vein. It is proper, it is a duty, for the President of a State Medical Association to place before the Profession its responsibilities in this first and fundamental business of organized medicine—that of promoting and supporting progress in medical education.

Physicians may year after year devote a large part of their time, and give of their substance, without remuneration except in satisfying a sense of duty; material benefits to the people and to the Profession may be postponed indefinitely or lost; effort may be starved and initiative stifled; all for the lack of that "extra bit." There is no greater or more needy opportunity before the Profession and none out of which greater good would come from a minimum of effort. It needs only that the message, the right information, be carried to the right people.

DISCUSSIONS

(Continued from Page 307)

be a mass transmission of sound—that is, the transmission of sound through materials under tension as we are well aware that you can hear, for instance, tubular breathing over fluid in the chest when it is under tension, and when it is not under tension you may not hear any breath sounds at all. Dr. Young's idea that under tension here the sounds were transmitted upwards and downwards, so that you could hear them in the peripheral branches, sounds very good. You have, however, two different types of material; you have solid or relatively solid material in the lung, where the consolidation was; and you have fluid media under pressure in the vessels. In order to have any sort of transmission sound those two pressures would have to be relatively the same, or there would be great deflection of the sound, the sound going through two different media, or perhaps deadening of the sound to the point where it could not be heard. It is quite possible that this man's blood pressure was considerably reduced and the intrathoracic pressure increased to the point where it made it possible for the sound to be heard, owing to the fact that the densities were not the same.

Dr. J. Heyward Gibbes, Columbia:

I have been very much interested in this excellent case report of Dr. Young's and I am only sorry to have to say something about the subject in relation to the nonspecificity of the sign which he has described. For quite a long time I have occasionally run across this phenomenon that Dr. Young has spoken of, and it has not been in any particular type of respiratory disease. I might say it is not uncommon to find the transmission of respiratory sounds into the bicipital space, audible between the systolic and diastolic pressures. I have heard the rales in the condition of bronchitis and even in cases of relatively mild pulmonary tuberculosis. I have occasionally heard a crepitant type of rale in the bicipital space with the blood pressure cuff in place in anything above the diastolic pressure. In bronchial asthma it is not uncommon to hear this type of rale, so much so that I wondered if I was getting a transmission of sound through my ear rather than through the stethoscope itself. Again, I have heard the borborygmi of the intestinal tract through the stethoscope.

What is the origin of it I do not know, but I would say, Dr. Young, the sign is not a specific sign of pulmonary embolism or thrombosis.

Dr. Young, closing the discussion:

I have nothing to add. I reported the sign because it was to me interesting. I have heard the sounds that Dr. Gibbes referred to—borborygmus transmitted; sometimes we do not need a stethoscope to hear such sounds. I have heard muscles sounds, and I have heard respiratory sounds. This sound was a tubular, high-pitched sound; I had never heard anything like it over the arm. I had some doubts as to whether it would be constant in pulmonary embolism, but it was a new sign to me and I wanted to report it.

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